

NISS

Parameters

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Sunday, July 29 and Tuesday, July 31





Message from the Director

Welcome to the spring edition of NISS Parameters Newsletter.

NISS continues to reinterpret its mission in keeping with its roots in cross-disciplinary research and a new focus on the role of statistics in data science. As big data analytics and data science become more visible and dominated by computer science trained professionals, there is an increasingly important role required of statisticians to provide input into the issues related to data quality, uncertainty measurements, and limits of inference. Although machine learning can provide successful predictions, it does not provide the insight into the underlying mechanisms or causality.

NISS is also looking to bring on board new postdoctoral fellows or research associates as early as this September. Recent PhD graduates with expertise in the areas of survey methodology, education statistics, statistical computation, and modeling are encouraged to click on the job announcements link on the NISS home page for more information.

In this edition we feature NISS research associate, Dr. Ya Mo, who joined NISS in 2015 and has applied her expertise to solve challenging problems at the National Center for Education Statistics (NCES) on restricted use data sets. Also featured in this Newsletter is new board member Dr. Mimi Kim, who brings multiple strengths and new perspectives to our board discussions. Two additional board members from Biostatistics departments will also join the board this summer and will appear in a future newsletter.

Recent NISS Events:

We have just completed an R & Spark training workshop in Toronto, the first joint event with the Canadian Statistical Sciences Institute, CANSSI, building on the relationship with our sister institute established several years ago. CANSSI members also benefit from reduced admission to our co-sponsored events and they open their events to NISS affiliates on a priority basis. And, the latest NISS-Merck Virtual Meetup was held on April 25 on Applications of Machine Learning in the Pharmaceutical Industry. See the [NISS website for past events](#).

Other recent regional past events that were cosponsored by NISS: The sixth Network of Greater Georgia Institutions for Neuroimaging and Statistics (NOGGINS) workshop was held at University of Georgia, Athens, GA, with a focus on neuroscience and neuroimaging. This successful workshop brings a keynote speaker, and creates a forum to share their latest research findings. Another example is The University of Georgia/Clemson University Joint Seminar, which dates back many years, and fosters cross-institutional collaborations. Affiliates should notify us of upcoming activities, which may be eligible for NISS co-sponsorship. As NISS continues to expand our affiliate programs, we are seeking new affiliates in all sectors, Academic, Government and Industry. Being a NISS academic affiliate provides opportunities for faculty to network with other affiliate members. When affiliates organize meetings and workshops the NISS Affiliate Award Funds (AAF) can assist in support of speakers, plus other affiliate members can use funds from their AAF to pay registration and travel expenses to attend. These funds can be used by an affiliate to support young faculty members, postdocs, and/or graduate students to attend NISS sponsored events. For more information on becoming an affiliate, visit our website: www.niss.org/affiliateprogram-information.

Upcoming NISS Events:

The Symposium on Data Science and Statistics in Reston, VA on May 16-19, another R & Spark Workshop in Washington DC on May 30-31, and the Southern Regional Council on Statistics (SRCOS) Conference at Virginia Beach on June 3-6, are all co-sponsored by NISS, which provide an opportunity for networking with other affiliates and for using the NISS AAF travel funds. The Symposium on Data Science and Statistics (SDSS), formerly known as the Interface conference, has several NISS organized sessions and since NISS is a sponsor we have a table in the exhibit hall. Stop by to meet our staff and board members and learn more about how you can participate in NISS activities. Two postdoctoral research associates are presenting during the SDSS meeting and several more at the JSM in Vancouver in the summer.

JSM Activities:

The annual NISS affiliate meeting will occur on Sunday 11 am – 2 pm with a program focused on how data science groups are organized in academia, industry and government. In addition, NISS has organized the popular writing workshop for young researchers with support from NSF and seven statistical societies. The NISS reception, with announcements and awards, will be a joint event with our sister organizations, and be held on Monday 6-8 pm at the convention center. Other Highlights of NISS activities during JSM are given on page three below. The 2017 Sacks Award winner will present on Thursday morning in a session about Genomics and Bioinformatics. We hope to see many of you there.



by Jim Rosenberger
Director NISS

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.

MEET NISS BOARD MEMBER MIMI KIM

NISS

Mimi Kim is appointed to the NISS Board by the Committee of Presidents of Statistical Societies (COPSS). The COPSS committee provides a forum for member societies to discuss issues important to statistics. Kim is a professor of Biostatistics at the Albert Einstein College of Medicine's Department of Epidemiology & Population Health. She also heads the department's Division of Biostatistics which consists of 20 faculty and staff. At Albert Einstein College of Medicine, Kim is conducting research in the area of systemic lupus erythematosus, an autoimmune disease that frequently occurs in younger women. Most lupus trials have failed to identify effective new therapies. "And it's unclear whether these failures are caused by treatments that don't work or by flawed study designs and weak analytic approaches that can't detect treatment signals because the patient population is so heterogeneous," says Kim. On this project, Kim is mining data from past industry-sponsored trials with the goal to better understand the methodological challenges in evaluating new drugs for lupus and improve how future trials are designed and analyzed.

BOARD EXPERIENCE

"I was very honored," says Kim, when she was approached to join the NISS Board. Adding she said, "I am passionate about NISS' mission to bring together people from academia, government and industry to collaborate on finding statistical solutions to complex problems. I also think the opportunities for continuing education which NISS offers to the statistical community are extremely valuable."

Board members play an important role in steering the organization to advance its mission. Kim served on the boards of many other organizations including the American Statistical Association's (ASA) Council of Chapters Governing Board as Vice Chair for District 1. She is currently the president of the Korean International Statistical Society. Before becoming president of the society, Kim served as a board member for several years. She says, "I'm continuously amazed at how a board member can have an impact just by putting in a little effort. The experience is very interesting and rewarding."

Talking about her motivation to join the NISS Board, Kim says, "I was impressed with Jim Rosenberger's vision for NISS, and especially his plans for increasing opportunities for interactions between statisticians from different sectors." Kim has done a lot of work in academia and hopes that she can help expand NISS' network and affiliations with academic institutions and come up with new ideas for how NISS can increase its value to these affiliates.



Mimi Kim, NISS Board Member

RESEARCH INTERESTS

Kim spent her entire career working at medical schools, spending 13 years at New York University and has been with the Albert Einstein College of Medicine for 15 years. Her research interests have largely been in the areas of epidemiological and clinical studies. While she was working on research projects on cancer and HIV, she became interested in developing methods for analyzing serial measures of disease biomarkers, and ways to correct for measurement error which can be caused by faulty lab techniques and natural biological fluctuations.

In addition, Kim is interested in assessing how measurement error, non-compliance to treatment, and missing data can influence the design and analysis of trials where the goal is to show that the experimental treatment is non-inferior when compared to a control or standard treatment. These non-inferiority trials are becoming more common and are relevant when the new drug is safer, cheaper, easier to administer, or offers other benefits compared to the standard.

Kim was born in California but she spent most of her childhood in the suburbs of Washington, DC. She returned to Northern California when she was 14 and attended the University of California, Berkeley where she studied bioengineering. During her senior year at Berkeley, Kim worked part-time as a public health researcher at the start of the AIDS epidemic. She attended Harvard School of Public Health to pursue a master's degree and a doctorate in biostatistics. She now lives in New York. Kim is an avid runner and enjoys going on long hikes in the woods with her 9-year-old dog, Lucy. She also loves exploring New York City on the weekends with her husband and trying new restaurants and visiting museums.

NISS HOSTED EVENTS

R AND SPARK: TOOLS FOR DATA SCIENCE WORKFLOWS

When: September 30, 2017 to October 1, 2017

Where: University of California, Riverside, California, 92521, U.S. (AAF)

NISS/WSS WORKSHOP ON INFERENCE FROM NONPROBABILITY SAMPLES

When: September 25, 2017

Where: Bureau Labor Statistics Conference Center, Washington, District of Columbia, 20212, U.S. (AAF)

R AND SPARK: TOOLS FOR DATA SCIENCE WORKFLOWS

When: September 14-15, 2017

Where: American Statistical Association Headquarters, Alexandria, Virginia, U.S. (AAF)

NISS-MERCK VIRTUAL MEET-UP

When: September 12, 2017

Where: Virtual (AAF)

NISS SPONSORED EVENTS

DESIGN AND ANALYSIS OF EXPERIMENTS (DAE 2017) CONFERENCE

When: October 12-14, 2017

Where: UCLA, Los Angeles, California, U.S. (AAF)

WOMEN IN STATISTICS AND DATA SCIENCE (WSDS) 2017

When: October 19-21, 2017

Where: Hyatt Regency, La Jolla, California, U.S. (AAF)

2018 CONFERENCE ON STATISTICAL PRACTICE (CSP) | AMERICAN STATISTICAL ASSOCIATION (ASA)

When: February 15-17, 2018

Where: Marriott Portland Downtown Waterfront, Portland, Oregon, 97201, U.S.

SIXTH NOGGINS 2018 WORKSHOP

When: April 13, 2018

Where: University of Georgia, Athens, Georgia, 30602, U.S. (AAF)

AAF = Affiliate Award Fund eligible event

The theme of the 2018 Joint Statistical Meeting (JSM) hosted by the American Statistical Association is #LeadWithStatistics. The conference will cover topics ranging from statistical applications to methodology and theory to the expanding boundaries of statistics, such as analytics and data science. The 2018 JSM Conference will be held at the Vancouver Convention Centre from July 28 to August 2, 2018.

NISS SPONSORED INVITED SESSIONS

NISS has organized two invited sessions at the JSM conference. The first session is the Jerry Sacks Award session focused on Genomics and the second session is on Big Data. Four distinguished speakers will be speaking at each of these two sessions. An additional topic-contributed session has also been accepted in the JSM program in which NISS current and former postdocs will be speaking about their work.

NISS SPONSORED INVITED SESSIONS

Monday, 7/30, 10:30 AM - 12:20 PM

[Big Data Statistical Challenges and Opportunities in Industry](#), (Lingzhou Xue, chair; James L. Rosenberger, discussant). Includes the following papers:

"Deep Analytics for Risk Analysis & Mitigation: From NLP, Computer Vision to Sensors," Siddhartha Dalal, "Risk Analysis in Banking," Vijayan Nair.

"Sound Statistical Inference from Big Data in the Insurance Industry," Christopher Haydon Holloman.

"Feature Engineering From Scratch", Andrew Smith.

Thursday, 8/2, from 8:30 AM - 10:20 AM

[Cross-Disciplinary Research on Statistical Genomics and Bioinformatics](#) (The Jerome Sacks Award session, Rebecca W. Doerge, chair). Includes the following papers:

"What has a Statistics Group Learned in Studying a Biological System," Wing Hung Wong.

"Learning Nonconvex Hierarchical Interactions," Lingzhou Xue.

"Bayesian Bi-clustering Methods with Applications to Integrative Genomics and Genetics," Jun Liu (2017 Jerome Sacks Award winner).

In addition, a topic-contributed session is also being sponsored by NISS where current and former postdocs will be speaking about their work.

NISS TOPIC CONTRIBUTED SESSIONS

Thursday, 8/2, 10:30 AM - 12:20 PM

[Statistical Challenges in Combining Survey and Administrative Data](#), (Joel Dubin, chair). This session includes papers given by current NISS Research Associates:

"Combining survey and administrative data to produce official statistics," NISS Research Associate Andreea Erciulescu, and

"Data Science in Educational Research: Opportunities and Challenges," NISS Research Associate Ya Mo.



OTHER NISS INVOLVEMENT AT JSM

A number of other papers and talks are being given by involving NISS projects. Mark your conference schedule!

Tuesday, 7/31, 10:30 AM to 12:20 PM

"Approximating Zero Standard Errors of County-Level Survey Estimates," NISS Research Associate Andreea Erciulescu.

Wed, 8/1, 2:00 PM - 3:50 PM

"Advances in Small Area Estimation Model-based Crop Yield Forecasting: Adjustment for Within-State Heterogeneity, Covariate Selection and Variance Estimation," Nell Sedransk.

"Toward an Updated Publication Standard for Official County-Level Crop Estimates," NISS Research Associate Andreea Erciulescu.

Wed, 8/1, 10:30 AM - 12:20 PM

"Deep Learning for Data Imputation and Calibration Weighting," NISS Research Associates Yijun Wei and Luca Sartore.

"A Global Convergent Algorithm for Integer Calibration Weighting," NISS Research Associate Luca Sartore.

Thursday, 8/2, 8:30 AM to 10:20 AM

"Logistic Regression Modeling for Capture-Recapture Estimation in the 2017 Census of Agriculture," NISS Research Associate Luca Sartore.

Thursday, 8/2, 10:30 AM - 12:20 PM

"Ad-Hoc Calibration for Rounding Rules with Nonlinear Benchmarks," NISS Research Associates Andreea Erciulescu and Luca Sartore.

"NISS continues to advocate for a broad cross-disciplinary role of statistics in the profession," says James Rosenberger, NISS Director. He adds, "NISS is also aiming to reach beyond the traditional statistical sciences to become the catalyst for maintaining statistical ideas and thinking as part of the big data and data science movement."

NISS RECEPTION - Monday 7/30, 6 - 8 pm

The annual NISS Reception is traditionally held at the JSM Conference each year. The Jerome Sacks Award for Cross-Disciplinary Research is presented. This award honors Jerry Sacks, who was the first Director of NISS and a distinguished statistician who made significant contributions to the Statistics bridge theory, methodology and collaborative science and engineering. In addition, NISS also presents the Distinguished Service Award to recognize individuals who have given extraordinary service to advance NISS and its mission and the NISS Former Postdoc Achievement Award to recognize NISS Postdocs who have had distinguished careers.

NISS AFFILIATES LUNCHEON - Saturday 7/28, 11 - 2 pm

Each year at JSM, NISS Affiliates get together for a luncheon. All Affiliate members are welcome to attend this luncheon. Talk to your Affiliate Liaison more information about attending.

This year luncheon speakers will talk about how data science groups are organized within industry as well as within institutes of data science in academia. Souvik Ghosh, Senior Staff Data Scientist at LinkedIn headlines the luncheon speakers.

(Joel Dubin, organizer / moderator)

NISS WORKSHOP: Writing Workshop for Junior Researchers

Taking place in two sessions, the first on Sunday 7/29 and the second on Tuesday morning 7/31, this is a popular and valued workshop geared toward individuals early into their research career. Whether writing for publication or preparing grants, advice, experience and mentorship is provided to participants. ([See article on Page 6](#))

DON'T FORGET TO STOP BY THE NISS BOOTH - #341 !

NISS will also have a booth at the JSM 2018. The booth is an opportunity for JSM visitors to meet NISS Board members and Senior Affiliate Liaisons and also chat with Junior Liaisons from NISS Affiliates to learn about NISS activities. Also, it is a great opportunity to learn how to become a NISS Affiliate and to learn about the NISS Postdoctoral Program. "Please stop by and visit us at our booth to express your preference for new opportunities and/or locations for NISS activities," Rosenberger adds.

Check the [JSM 2018 Online Program](#) for any last minute changes to the conference schedule.



OTHER UPCOMING NISS HOSTED OR CO-SPONSORED EVENTS - MARK YOUR CALENDAR AND SHARE!

As of the printing of this newsletter, here is what we have on tap for upcoming events that are *Affiliate Award Fund Eligible!* (AAF) Click on the links below or the NISS Upcoming Events page on the NISS website.

[BOOTSTRAP METHODS AND PERMUTATION TESTS](#) (AAF)

When: Full or Half-day course, dates available in May and June 2018
Where: Washington, DC area

[SYMPOSIUM ON DATA SCIENCE AND STATISTICS \(SDSS\)](#) (AAF)

When: Wednesday, May 16 through Saturday, May 19, 2018
Where: Hyatt Regency - Reston, Virginia

[R & SPARK: TOOLS FOR DATA SCIENCE WORKFLOWS](#) (AAF)

When: Wednesday, May 30 through Thursday, May 31, 2018
Where: Bureau of Labor Statistics Conference and Training Center - Washington, DC

[SOUTHERN REGIONAL COUNCIL ON STATISTICS \(SRCOS\) CONFERENCE](#) (AAF)

When: Sunday, June 3 through Wednesday, June 6, 2018
Where: Virginia Beach Resort Hotel and Conference Center - Virginia Beach, VA.

[STATFEST 2018: A ONE DAY CONFERENCE FOR UNDERGRADUATE STUDENTS](#) (AAF)

When: Saturday, September 22, 2018
Where: Amherst College, Amherst MA

"One of my greatest challenges is to synthesize two types of research approach—theory-driven research and data-driven research—and utilize their strengths in my research."

Some individuals enjoy finding ways to challenge their breadth of knowledge and range of experience. Meet Ya Mo. She is a Research Associate at NISS working on projects that involve data associated with the National Council of Education Statistics (NCES). She is one of those individuals.

Before pursuing graduate studies in the U.S. Ya was a lecturer at Hunan University of Technology in China where she taught English language to Chinese college students. While she received awards for her outstanding teaching, more importantly, her teaching experience spurred her to learn more about teaching. Attending Boston University on a merit-based fellowship to obtain a Master's degree in Teaching English to Speakers of Other Languages (TESOL) gave her this chance to understand more about pedagogy. From there she accepted a fellowship opportunity to engage in further graduate studies at Michigan State University (MSU). It was at MSU that her interest in statistics began while taking graduate-level quantitative methods classes.

"I kept hearing the phrase, "... assuming a normal distribution ...". While I was amazed by what statistics could do, I also wondered why we made those assumptions."

This curiosity drove her complete a Master's degree in Statistics, and later combined this with her interests and experience in teaching and learning into a dual PhD in Quantitative Methods and Measurement, and Curriculum, Instruction and Educational Policy.

This led to five years as a research assistant conducting research on connections between reading and writing for students' struggling in elementary schools in the U.S., as well as researching the alignment between writing standards and writing assessments in all 50 states and how that alignment can predict student performance in NAEP writing assessments. She also examined the alignment between content standards and professional standards for Michigan teachers as an intern with the Michigan Department of Education.

Prior to writing her dissertation, she also pursued research on how English writing prompts impacted English as a Second Language (ESL) students' writing performance. Using discourse analysis, she examined several states' writing

assessment prompts in terms of their cohesion, specificity, and cultural accommodation. She also explored the National Assessment of Educational Progress (NAEP) prompts and their impact on the writing performance of ESL students and native English speakers through quantitative methods like t-tests, ANCOVA, and logistic regression, and through psychometric measures, such as Differential Item Functioning (DIF). This study won the Midwest Association of Language Testers (MwALT) Graduate Student Award for Excellence in Language Assessment Research.

Her dissertation research examined constructs of writing proficiencies in state and national assessments in the U.S. through content analysis of writing prompts and rubrics; predicted students' writing performance on the National Assessment of Educational Progress (NAEP) from assessment variations using Hierarchical Linear Modeling (HLM); and explored genre demands in state writing assessments through syntactic analysis of writing prompts and content analysis of rubrics and state standards.

Now at NISS since 2015, she conducts research on quantitative methods, psychometric measures, and survey statistics. She also applies quantitative research methods to study substantive topics in education using National Center of Education Statistics (NCES) restricted-use datasets. As one example of this work, she analyzed data from the 2011 ECLS-K assessments to investigate factors from students' demographic backgrounds and their relationship to students' academic performance in reading and math by the spring of their kindergarten year and also their relationship with the gains made in each subject during the kindergarten year.

Ya Mo has developed into a circumspect researcher who recognizes that to move forward she often needs to bring together additional areas of understanding.

When she is not involved in her research Ya enjoys reading, watching a movie, hiking, relaxing on the beach or exploring restaurants trying new foods. She has backpacked in 11 countries in Europe and has visited 28 states in the U.S.!



"Statistics provide tools for me to examine interesting phenomena in education. One of my research interests is in large-scale assessments. It requires an understanding of assessment, measurement, educational statistics, and survey statistics, so statistics are at the core of the knowledge and skills that I need to examine large-scale assessments."



"I appreciate all the opportunities that NISS has given me to learn and to grow as a researcher as well as allowing me to apply my knowledge and skills to study interesting educational phenomena."

WRITING IS IMPORTANT!

The ability to write well is critical in the professional life of statisticians. Research can only be valued when it is communicated to other researchers, and this is done broadly through peer-reviewed publications. An inability to write well can hinder publication of a researcher's results. This in turn slows the research process (and the researcher's career!) since others are not aware of these results.

Knowing how to write for a journal involves understanding how the discourse is organized in a technical publication. Writing articulately accelerates the publication process by obviating the need for excessive revisions and by speeding the reviewing and editorial processes. Preparing grant proposals may be another major part of a researcher's life that also demands good writing. The highly competitive nature of funding means that communicating one's ideas clearly is critical for obtaining an award. Excellent research ideas are not enough if reviewers must struggle to figure out what is being proposed.

CAN THIS WORKSHOP HELP YOU?

From 2007 to 2016, NISS has organized successful technical writing workshops for junior researchers in statistics, biostatistics and data science. In fact, many of workshop graduates have become associate editors of major statistical and biostatistical journals, (with at least 23 associate editorships and one co-editorship among 109 recent graduates!)

WHAT IS THE WORKSHOP'S FOCUS?

The workshop includes presentations by senior statisticians, past editors for major journals, previous funding agency program directors and study section members experienced in grants preparation and grants review. They will share their experience with you regarding journal-specific issues and funding-agency expectations.

But the most valuable aspect of the workshop is the one-on-one editorial consultation for each participant. In advance of the workshop, each new researcher must submit a working paper intended for publication or for grant submission. Based on this work, the new researcher will be matched with a mentor (one of the cadre of senior statisticians) who will bring to the workshop a constructive review of this working paper. So, if you are working on something, why not take advantage of this experience and expertise!

WORKSHOP FORMAT

The 2018 NISS writing workshop at JSM consists of two parts.

The first session will begin Sunday morning and run until the middle of the afternoon. This session covers scientific writing as well as how to organize a paper. Ethical issues will also be discussed in addition to special considerations in writing grant proposals, issues of journal choice, and understanding and responding to reviewer comments. At the end of this session, each participant meets with the assigned mentor who has reviewed and critiqued the participant's working paper.

The second (and final) session will be Tuesday morning and will focus on specific issues for participants whose native language is not English, covering the writing process and details of grammar, sentence structure, and word choice. Then, senior researchers whose

native language is not English talk about their experiences with technical writing in English with time allowed for open discussion.

WORKSHOP AUDIENCE

Participants will be chosen from the applicant pool based on applications (including writing sample / working paper) submitted to NISS/ASA. Eligible applicants for the Writing Workshop are faculty and postdocs who have received their Ph.D. in statistics, biostatistics, or a related field in 2010 or later. Priority will be given to researchers who are 0-3 years post Ph.D. and to members of the professional societies supporting the workshop.

Want more information? [Click now to Apply / Register!](#)



HAVE A POSITION TO FILL? ANNOUNCE YOUR JOB OPENINGS ON THE NISS WEBSITE

Did you know that the NISS website has a section of it reserved for the posting of job announcements for all affiliates? It can't hurt to share your announcement with other organizations associated with NISS or other visitors to our website. There are couple of ways you can get this information to us:

1. Fill out our new [Webform for Job Postings](#).
2. Send to communications@niss.org the information you have posted about the position you are looking to fill, or better yet, send us the link to where you might have it posted already.

After a period of 3-4 months all positions will automatically be deleted, unless of course we hear from you earlier. So, if you have a standing offer you will need to contact us a couple of times a year. We are determined to keep your job announcements fresh!

A link to the [Job Announcements page](#) can be found at the bottom of every page of the NISS website!

Coming Soon! Check our Job Announcements page for positions at NISS for post-doctoral positions.

UNIVERSITY OF GEORGIA HOSTED THE 6TH NOGGINS WORKSHOP

On April 13th the Functional Magnetic Resonance Imaging Group at the University of Georgia (UGA) hosted the 6th NOGGINS (Network of Greater Georgia Institutions for Neuroimaging and Statistics) workshop at the Special Collection Library at UGA. There were 28 participants from both UGA and Emory University at the workshop. Speakers included:

- Arunava Samaddar, Statistics, UGA
- Yi Hong, Computer Science, UGA
- Brooke Jackson, Psychology, UGA
- Timothy Johnson (Key note speaker), Biostatistics, University of Michigan
- Courtney Burton, Psychology, UGA
- Benjamin Risk, Biostatistics and Bioinformatics, Emory University
- Chul Moon, Statistics, UGA
- Ling-Yu Huang, Psychology, UGA

NISS co-sponsored this event.



BOOTSTRAP METHODS AND PERMUTATION TESTS NISS WORKSHOP - TIMES AVAILABLE IN MAY/JUNE

This full-day or half-day course is designed to introduce participants to Bootstrapping and Bootstrapping methods. The course takes a graphical approach to bootstrapping and permutation testing, illuminating basic statistical concepts of standard errors, confidence intervals, p-values and significance tests.

This course will consider a variety of statistics (mean, trimmed mean, regression, etc.), and a number of sampling situations (one-sample, two-sample, stratified, finite-population), stressing the common techniques that apply in these situations. It will also look at applications from a variety of fields, including telecommunications, finance, and biopharm.



Want to see this courses take place in your area?

NISS can help you facilitate this course. Please write to us at officeadmin@niss.org or call us at 202-862-4316. (See [more info, times and locations](#))

NISS / CANSSI R AND SPARK WORKSHOP TAKES PLACE IN TORONTO

Co-sponsored by both NISS and the Canadian Statistical Sciences Institute (CANSSI), E. James Harner, Professor Emeritus of Statistics at West Virginia University worked with 15 participants in Toronto, April 12th and 13th, 2018.

In this workshop Dr. Harner worked through the initial steps in the data science process; extracting data from source systems, transforming data into a workable format, and then loading data into distributed file systems, distributed data warehouses or NoSQL databases. SparkR and sparklyr were 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. Additional methods, such as gradient boosting and deep learning, are illustrated using the h2o and rsparkling R packages. Methods for analyzing streaming data were also presented. After the two-day workshop, participants walked away tired but a happy group.

Comments from participants:

"For the content and level of complexity this course provides, it was taught extremely well."

"I found the workshop very helpful. I know I'm going to look at the course notes again in the near future."

"The professor's years of experience can be seen very well. Provided a lot of insight on the field, as well as some small tips/tricks from his code."

If this is the type of workshop that you would like to see take place in your area, please do not hesitate to contact NISS with your suggestions.

PLEASE NOTE: This course will be taught again at the Bureau of Labor Statistics Conference and Training Center in Washington, D.C. May 30 and 31, 2018. Register on the [NISS website - Upcoming Events!](#)



www.NISS.org

For more information about the National Institute of Statistical Sciences,

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