

Parameters

SPRING | 2021

IN THIS NEWSLETTER...



Page 4

CONNECT



RESEARCH

Page 2



Page 6

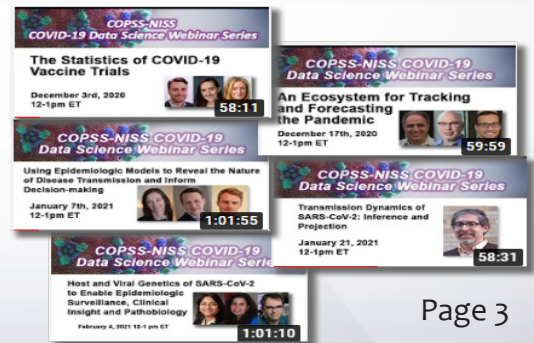


MEETUPS

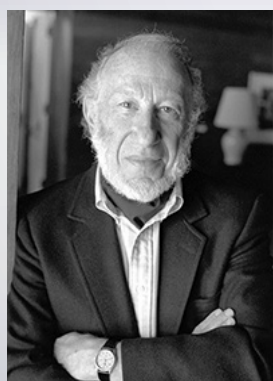
LEARN

EVENTS

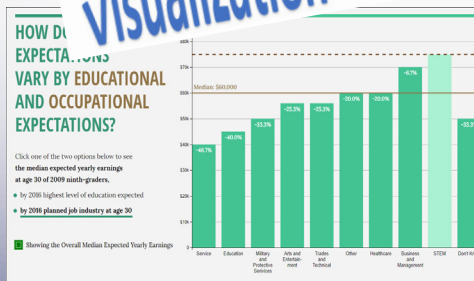
DATA COMPETITION
Visualization



Page 3



Page 7



Page 5

Essential Data Science for Business



Page 3



Welcome to the Spring 2021 NISS Parameters Newsletter!

This spring feels very different from a year ago when we were plunging into the pandemic – now feels like coming out of darkness into daylight. Most of the NISS staff are vaccinated and looking forward to more events in person. Despite the pandemic restrictions, NISS has expanded and extended its reach with our series of webinars, meetups and tutorials described in this Newsletter. The NISS Board of Trustees met on April 23 and welcomed five new board members who bring a wonderful variety of perspectives and expertise as described below. The first

CANSSI – NISS three-day Health Data Science workshop, originally scheduled to be held at the University of Waterloo, was held virtually via Zoom and allowed us to welcome more than 200 participants from all over Canada and the US, instead of the 50 originally projected.

Other recent activities described below are the essential data science for business tutorials, the twelve COPSS–NISS COVID-19 Data Science webinars, and another successful NISS–Merck meet-up, focused on open-source software for regulatory submissions. We invite you to visit our website, donate to our NISS outreach fund, and to the Ingram Olkin Forums Statistics Serving Society to allow us to continue offering these activities at no or low cost for the statistical and data science community. We also post these videos on our YouTube NISS communications channel. We are thankful for the ongoing support from our academic, government, and industry affiliates, and invite additional statistics, biostatistics and data science academic departments, Government agencies and industry to become NISS affiliates. See the information on how to participate and the benefits of joining. Note upcoming events you can participate in, including the debate on the importance of statistics versus data science in the K–12 curriculum, and the additional COPSS-NISS webinars.

Jim Rosenberger, Director, NISS

Halfway there !!! NISS-DC is returning to K-Street, although NISS Research Associates and Fellows posted at federal agencies still work remotely. First quarter of 2021 was incredibly busy and everyone at NISS-DC managed with workload, we all look forward to once again working in the normal way with real face-to-face conversations.

NISS and NCES: March is the end of the 9th of 10 project periods for the NCES research projects and panels. NISS delivered three phenomenal expert panel reports to NCES (soon to be made public on the NISS website - NCES Report Library.) As NCES and the context for the federal statistical agencies evolve, new opportunities and new urgencies dictated three contemporary topics for experts to consider covering data collection, data resources and data representation. The first panel outlined the issues and possible sources for solution surrounding Post-Covid Surveys. The second panel, Innovative Graphics for NCES Online Reports, took a fresh look at presentation of information on the NCES website through use of more inventive and eye-catching graphics. The third of the panels, Setting Priorities for Federal Data Access to Expand the Context for Education Data scoped out the potential for combining information from multiple federal sources, especially geo-linked data, to allow kinds of research that require information outside classroom activities, leaning measures, or school district records.

NISS at NASS: Work in RDD (Research Development Division) continues on six of the “Top 10” with NISS researchers (Luca Sartore, Lu Chen and Zach Terner) providing key technical work. Under the new administration, NASS projects are only increasing in value and impact. Please note – and read elsewhere in this Newsletter – about Lu Chen’s Award as “NASS Cooperator of the Year.” Also, read about Phil Kott who deserves the wonderful recognition by the USDA that his award connotes.

NISS in DC: During this quarter beside keeping all of NISS operations running smoothly, NISS staff have provided support to NISS, Affiliate and IOF committees, including the new NISS Graduate Student Network. Activities of all these groups may have been virtual, but their success can be attributed to the collaborative efforts of NISS-DC and NISS-PSU to organize, advertise, register and report on these events (also mentioned elsewhere in this Newsletter, on the website and via NISS media outlets). The Mid-Year Update was assembled as part of the preparations for the Board of Trustees meeting (also available on the NISS website) with a comprehensive chronicle of the myriad NISS events held during the second half of 2020. (Stay tuned – the Annual Update for July 2020-June 2021 will document the continuation of this level of NISS activity.)

Greetings from K-Street with progress toward establishing a new, better normal.

Nell Sedransk, Director - DC

ABOUT NISS

The National Institute of Statistical Sciences (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 and data sciences.

FEATURED UPCOMING EVENTS

NISS

The Statistics Debate II: Teaching Statistics or Data Science in Grades K-12?

Wednesday, May 19, 2021 11:00 am - 12:45 pm ET

Where do you stand?

Is an earlier start on data science education too ambitious a goal to pursue, for both the students and teachers?

Can data sense, or data acumen, be trained well at K-12 or even younger?

Use small datasets or big data for teaching and practice at this level?

If you are intrigued by these questions and have an interest in how these questions might be answered - one way or the other - then this is the event for you!

This event will be held in a debate type of format. The participants will

be given selected questions ahead of time so they have a chance to think about their responses, but this is intended to be much less of a presentation and more of a give and take between the debaters.

So – let’s have fun with this! The best way to find out what happens is to register and attend!

[Register to Attend This Event Today!](#)



Moderator: Piaoimu Liu (Bentley) Participants: Anna Bargagliotti (Loyola Marymount), Christine Franklin (Georgia) and Rob Gould (UCLA).

NISS Graduate Student Research Conference

June 12-13, 2021 12 - 5 pm ET

The NISS Graduate Student Network is very excited to announce a two-day graduate student research conference!

This two-day event will feature graduate student presentations, invited speakers and a social networking hour.

Students can choose to present either an oral presentation or a poster presentation within the following categories:

- **Original Research** (their own research work),
- **Literature Research** (presentation of a published paper that is not authored by the presenter), or
- **Literature Review** (presentation on recent developments in an area -- this would be a chance to present a couple of papers to highlight recent developments in an area of interest.)

Selected oral presentations will involve a 20 minute live presentation including 5 minutes of Q&A.

NISS Affiliate Graduate Students - Use the link below to submit your interest in presenting at this conference! (Please Note: You will be asked to submit the title of your presentation, an abstract of 250 words. In your abstract for literature research presentations, please be sure to include a couple of sentences that highlight your interest in the paper!) Presenters will be notified with results of selection of live presentations on or around May 28.

Submission Deadline:
May 7th at 5 pm ET

[Register to Attend This Event Today!](#)



NISS Writing Workshop for Early Researchers (before & after JSM)

August 6 & 13, 2021

The National Institute of Statistical Sciences (NISS) has been hosting the Writing Workshop for Early Researchers since 2007!

Each year, in conjunction with JSM, NISS gathers a host of senior authors, editors, grant writers/reviewers—individuals who take valuable time out of their day to share their advice and experiences with a group of junior faculty and early researchers. Evidence of the value of this workshop experience can be judged by

- 1) the number of experienced, senior statisticians, authors and editors that have volunteered years for on end to share their wisdom and advice and
- 2) the number of session contributors that were once actual participants in the workshop!

Writing Workshop in 2021? You bet!

It is never too late to think about who might benefit next from this workshop at JSM 2021. Keep your eye on the NISS website or subscribe to our newsletter for all of the latest information about this and other professional development activities!

Virtual or In-Person? NISS is in the planning stages for this year’s Writing Workshop for Early Researchers 2021! You should be planning for it too! **Registration Deadline: June 20, 2021**

[Register to Attend This Event Today!](#)



ESSENTIAL DATA SCIENCE FOR BUSINESS TUTORIALS: ACCESS TO SESSIONS STILL AVAILABLE

NISS

This NISS hosted webinar series on the Essential Data Science for Business has come to a close. This exclusive NISS Event Series included: an overview session presented by Victor Lo of Fidelity Investments ([review the recording of this session](#)) as well as the following tutorials topics in this series:

- 1 - [“Data Science Workflows”](#) with Jim Harner
- 2 - [“Descriptive Analytics, Exploratory Data Analysis, and Data Visualization”](#) with Lee Wilkinson
- 3 - [“Predictive Analytics and Machine Learning”](#) with Yanling Zuo
- 4 - [“Causal Inference and Uplift Modeling”](#) with Victor Lo & Dominique / Jonathan Haughton
- 5 - [“Deep Learning”](#) with Ming Li
6. [“Energy, Interaction and Examples Highpoint of Unstructured Data Analysis Tutorial - Text Mining”](#) with Julia Silge
7. [“Implementation of Guidelines for Ethical Statistical Practice Illustrated”](#) with Rochelle Tractenberg
8. [“Three Data Scientists Provide An Insider’s Look into Critical Functions and Services”](#) with Jie Chen, Tim Hesterberg and Juan Li

Essential Data Science for Business

Optimization
Computer
Visualization
Communication
Exploratory
Ethics
Application
Knowledge
Skills
Programming
Inference
Unstructured
Sciences
Predictive
Learning
Analytics
Data
Analysis
Tools
Causal
Machin
Domain
Analytical

9. [“A Framework for Analytical Consulting in Business Contexts”](#) with Sam Woolford
10. [“Prescriptive Analytics and Optimization”](#) with Victor Lo and Dessislava Pachamanova

Each tutorial is presented as a stand-alone tutorial. You need not to have attended earlier sessions in order to attend later sessions.

Missed a session? No worries! Post-Session Access to tutorial materials and recording can be obtained for \$35 after the event is over. Select the Post-Session Access option on the [Past Event page](#) for each session.

SUCCESSFUL COPSS-NISS DATA SCIENCE WEBINARS CONTINUES WITH CURRENT COVID RESEARCH

The COPSS-NISS COVID-19 Data Science webinar series is co-organized by the Committee of the Presidents of Statistical Societies (COPSS) and its five charter member societies (ASA, ENAR, IMS, SSC, and WNAR), as well as NISS. This bi-weekly seminar features the latest research that is positioned on the cusp of new understanding and analysis of COVID-19 pandemic data, and promotes data-driven research and decision making to combat COVID-19. Find out more about this series and view all the previous sessions on the [Webinar Series webpage](#) on the NISS website.

The following webinars have taken place and recordings of these sessions can be found on the [NISS website](#) or within the [NISS Communications YouTube channel](#).

May 13, 2021 - [Communication of Statistical and Epidemiologic Concepts to Broad Audiences](#)

April 29, 2021 - [Communicating Statistics to the Media: Highs and Lows During the Pandemic Described](#)

April 15, 2021 - [Flying the Plane while Improving It – Learning from COVID Patient Data in Close to Real Time](#)

April 1, 2021 - [Pandemics, Poverty and Public Health: A Conversation with Jim Yong Kim](#)

March 4, 2021 - [Predictions, Role of Interventions and the Crisis of Virus in India: A Data Science Call to Arms](#)

February 18, 2021 - [Misinformation and Attitude Formation Analyzed Through Social Media Posts](#)



February 4, 2021 - [Host and Viral Genetics of SARS-CoV-2 to Enable Epidemiologic Surveillance, Clinical Insight and Pathobiology](#)

January 21, 2021 - [Transmission Dynamics of SARS-CoV-2: Inference and Projection](#)

January 7, 2021 - [Using Epidemiologic Models to Reveal the Nature of Disease Transmission and Inform Decision-making](#)

December 17, 2020 - [An Ecosystem for Tracking and Forecasting the Pandemic](#)

December 3, 2020 - [The Statistics of COVID-19 Vaccine Trials](#)

Check the [NISS Events webpage](#) for the next webinar!

NEW NISS BOARD OF TRUSTEES NAMED

NISS

NISS is very pleased to announce new board members whose terms will officially begin on July 1, 2021. New elected members to the NISS Board of Trustees include **Nancy Potok**, **Aarti Shah** and **Eric Tchetgen Tchetgen**. New members of the board serving as appointed Members of the NISS Corporation are **Xuming He** appointed by the IMS and **Mahlet Tadesse** appointed by ENAR.

Please join NISS is welcoming our new board members! NISS is looking forward to the new ideas and energy that these new members will bring to help direct the work of NISS as it delivers high-impact research in science and in public policy and leverages the rich expertise of its staff with that of its base of affiliated organizations in academia, industry and government. Here is a brief bio-sketch of each of these individuals.

Nancy A. Potok is owner and CEO of NAPx Consulting. She has over 36 years of senior level experience in the public policy arena within the public, private and non-profit sectors. Her focus is on evidence-driven decision-making, program evaluation, social science research, risk management, mentoring, and organizational transformation. Among the many positions she has held, Nancy recently served as Chief Statistician of the United States; US Office of Management and Budget, Chief Operating Officer and Deputy Director; US Census Bureau, and Deputy Under Secretary for Economic Affairs; US Dept. of Commerce. She remains Adjunct Professor at The George Washington University Trachtenberg School of Public Policy and Public Administration.

Aarti Shah is Senior Vice President and Chief Information and Digital Officer of Eli Lilly & Company, a global healthcare leader and a Fortune 500 company. She is an accomplished executive with 25+ years of extensive experience in drug development and commercialization, technology, cyber, digital transformation and data sciences. She is an agent of change and has successfully led large transformations with significant positive business outcomes. Aarti is a board member of Northwestern Mutual. She also serves on several non-profit boards. Aarti is known for her inspirational and genuine leadership style, and for leading global cross-functional teams from vision development to strategy creation to execution. She has held leadership roles in the U.S. and Australia.

Eric J. Tchetgen Tchetgen is Distinguished Professor of Statistics, in the Department of Statistics at The Wharton School, University of Pennsylvania. Eric's primary area of interest is in semi-parametric efficiency theory with application to causal inference, missing data problems, statistical genetics and mixed model theory. In general, he works on the development of statistical and epidemiologic methods that make efficient use of the information in data collected by scientific investigators, while avoiding unnecessary assumptions about the underlying data generating mechanism.



New Members of the NISS Board of Trustees: (left to right) Nancy Potok, Aarti Shah, Eric Tchetgen Tchetgen, Xuming He and Mahlet Tadesse.

Xuming He received his PhD in Statistics from University of Illinois at Urbana-Champaign in 1989. He joined the University of Michigan as H. C. Carver Collegiate Professor in 2011. His prior appointments include faculty positions at National University of Singapore and University of Illinois at Urbana-Champaign, and Program Director of Statistics at National Science Foundation. His research interests include broad areas of robust statistics, semiparametric models, quantile regression, Bayesian inference, and subgroup analysis. His interdisciplinary research aims to promote the better use of statistics in biosciences, climate studies, concussion research, and social-economic studies.

Mahlet Tadesse is Professor and Chair in the Department of Mathematics and Statistics at Georgetown University. She received her doctorate in Biostatistics from Harvard University and served on the faculty at the University of Pennsylvania as Assistant Professor of Biostatistics, prior to joining Georgetown University. She is an elected member of the International Statistical Institute and a fellow of the American Statistical Association. Her research focuses on the development of statistical and computational tools for the analysis of large-scale genomic data. She is particularly interested in stochastic search methods and Bayesian inferential strategies to identify structures and relationships in high-dimensional data sets.

Board of Trustee members beginning a second term include **Alyson Wilson** and **Nick Jewell**.

NISS would also like to wholeheartedly thank the following individuals whose terms on the NISS Board of Trustees have come to an end. These include **Raymond Bain**, **James Booth**, **Kate Crespi**, **Gabriel Huerta**, **Bhramar Mukherjee** and **Sam Woolford** for all of the work and efforts they have contributed during their terms of service with NISS.



NISS News of Note

NISS is pleased to announce that NISS Marketing & Communications Intern **Maggie Zhang** who has been instrumental in catapulting NISS communications into various social media outlets has been accepted to study M.S. in Integrated Marketing Communications at Northwestern University in Chicago. Congratulations to Maggie as this next chapter of her professional career begins!

Hey there! Stay connected with us on Twitter for the latest events information!



LinkedIn

Do you know that NISS is also active on LinkedIn?

NISS | National Institute of Statistical Sciences

NISS SAID in Graphics

1st Place Individual
Jingyi An – Department of Data Science, Columbia University

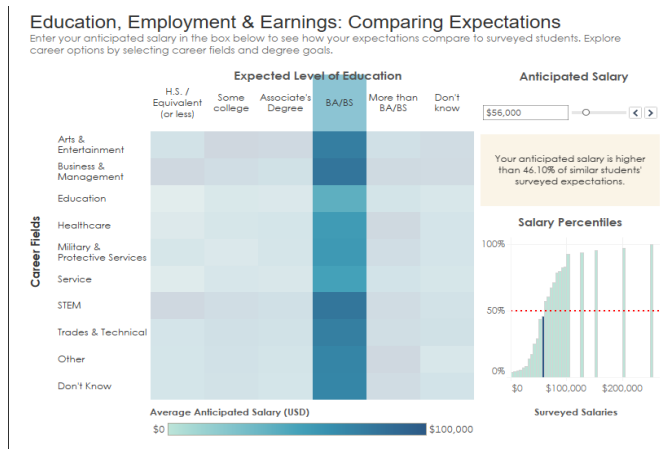
NISS is pleased to announce the Graduate Student Winners of the 2020-2021 SAID in Graphics Data Visualization Contest!

SAID in Graphics challenged entrants (individuals and interdisciplinary teams) to bring data to life for a wide public audience, using interactivity and clever graphics to attract attention while expanding insights from data about education. New takes on classic statistical graphics as well as some more contemporary approaches were designed to entice viewers starting from the first screen to “ask the next question.”

The 68 individual and 10 team registrants resulted in 14 individual and 10 team completed entries. Judging was based on the accuracy of the visual impression, how it addressed a question of educational interest based on the motivating report, and its accessibility and attraction for a wide audience. The judges were Nola du Toit at NORC, Jonathan Schwabish at the Urban Institute and Lee Wilkinson at H2O. Winners’ university home departments received the cash awards on behalf of all the winning participants.

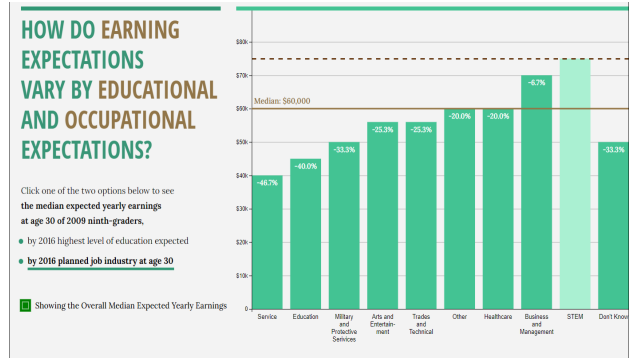
1st Place Team

Kevin Bryant - Department of Statistics, Penn State University
Dannielle Moriondo - Department of Communications, Westminster College



This team’s entry was based on the 2021 NCES online report, “Education, Employment, and Earnings: Expectations of 2009 Ninth Graders in 2016” and used data specifically subsetted and modified for this contest. This graphic coupled a heat map with associated cumulative frequency histograms. In particular, it received high praise for the easy entry into the graphic, allowing the viewer to find more detail by picking their own career or the expected level of education or a desired (anticipated) salary, then to make a different choice or to specify all three.

From the Judges... “This is a clever application of a Tableau dashboard. A good part of its cleverness is that it doesn’t look like a dashboard.” “Especially valuable is the integration of story-telling with the graphs themselves.”

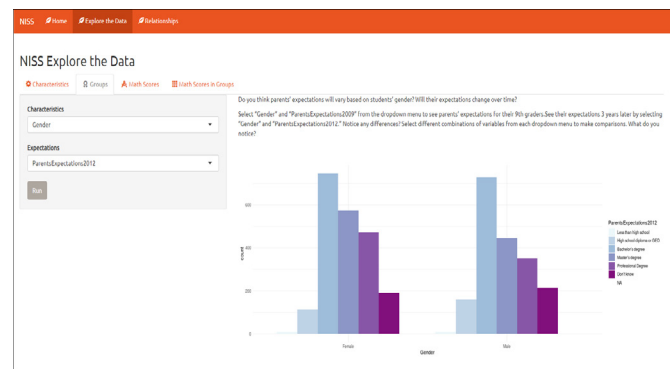


This entry was also based on the 2021 NCES online report, “Education, Employment, and Earnings: Expectations of 2009 Ninth Graders in 2016” and used the same data specifically subsetted and modified for this contest. This graphic presented an elegant histogram that is immediately accessible, and invites the viewer to ask about both industry and education as they impact expected earnings for these same students in another seven years.

From the Judges... “So good! So clear, so simple, so pretty.” “The layout and headers and text are very good and support the graphic.”

Judges Choice Award

Aria Haji-Georgi, Oxana Rosca, Ching-Yen (Elie) Yu, and Xinyun Xu – Department of Educational and Counseling Psychology, The State University of New York at Albany
Falon Treis - Department of Geography and Planning, SUNY Albany



This team chose a different NCES online report, “Parent and Student Expectations of Highest Education Level” and used data specifically subsetted and modified for this contest. This graphic was singled out by the judges for its immediacy in communicating with viewers. First, the information on its opening screen and then its use of explanatory prompts encouraged viewers to “keep turning the page” to get the full story.

From the Judges... “This shiny app is thoughtful, very user friendly, and would appeal to a large audience.”

DATA COMPETITION
visualization

News Story and Full-Sized Graphics!

RECENT NISS HOSTED EVENTS:

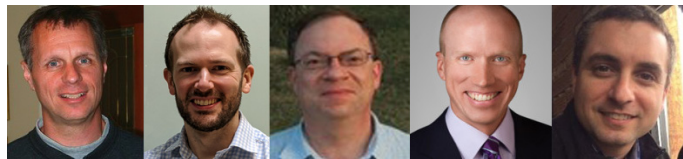
NISS-Merck Meet-up Discusses Open-Source Software in Pharma

Typically, in NISS-Merck meetups you find yourself immersed in detailed discussions about the statistical issues involved in drug/vaccine development and/or clinical trials. This time around the focus seemed to shift from applications to implications. If you use increasingly popular open-source software, what challenges will you face when you try to bring pharmaceutical developments and/or medical devices up for review by regulatory agencies?

Moderator **Dan Holder** (Merck) brought together four experts to discuss the reasons why open software approaches make sense, but on the other hand raise issues and challenges that result. These speakers included **Andy Nicholls** (R Validation Hub, GSK), **Paul Schuette** (FDA-CDER), **Ted Lystig** and **Tarek Haddad** (Medtronic).

The first speaker was **Andy Nicholls** who is currently the chair of the executive committee of the R Validation Hub. He first steered the discussion away from the validation of any particular software, instead taking great pains to describe the reliability of software using the FDA's clarification document and a software example to drive home this point. From here he talked about the issues related to the difficulty in using open-source languages for GxP analyses.

The second speaker was **Paul Schuette**, Scientific Computing Coordinator at FDA-CDER. He reviewed the FDA's submission procedures, especially as related to standards and guides to computing environments that are typically included with submissions and discussed a number of perceived challenges to using open-source approaches including issues that may surround



support, the amount or type of legacy code used within an institution, as well as the skill sets required by IT departments.

"FDA does not require use of any specific software for statistical analyses, and statistical software is not explicitly discussed in Title 21 of the Code of Federal Regulations [e.g., in 21CFR part 11]. However, the software package(s) used for statistical analyses should be fully documented in the submission, including version and build identification."

Paul Schuette (FDA-CDER)

Tarek Haddad led off the team from Medtronic that also included **Ted Lystig**. Tarek focused his remarks on the development of two statistical packages in R for regulatory purposes, why Medtronic built these packages and the lessons learned in the process. **Ted Lystig** followed Tarek with more general thoughts about moving to using more open-source software including why this move would be made, and how this change can be made.

"The uninitiated may feel that only commercial statistical software systems could be accepted by FDA. The FDA has clearly stated that this is not the case."

Ted Lystig (Medtronic)

[Read the Full Story on the NISS website!](#)

First CANSSI-NISS Health Data Science Workshop a Virtual Success!

The First CANSSI-NISS Health Data Science Workshop was held not in Waterloo, Ontario as was originally planned but virtually hosted by NISS on Zoom May 7 through 8, 2021. Nearly 200 statisticians and health data scientists from the U.S. and Canada logged into a variety of thought-provoking and cutting-edge sessions on topics relating to exploring current approaches and new challenges being worked on for integrating Big Data in Health Data Science.

The workshop started on Thursday with the presentation of four short courses on a variety of topics.

Xiao-Li Meng (Harvard University) started the day on Friday presenting a fascinating plenary entitled *"Personalized Treatments: Sounds Heavenly, But Where on Earth Did They Find My Guinea Pigs?"* His talk focused on revealing the implications behind the use of machine learning algorithms to 'personalize' medicinal treatments. In his own words, *"Anytime you talk about personalization, there has to be a leap of faith!"*

He was followed by short presentations of posters by eight finalists of the Poster Competition for Students and New Researchers.

The rest of the day on Friday was devoted to two major topic areas. First talks regarding work related to the statistical issues with COVID-19. The invited speakers included **Nilanjan Chatterjee** (Johns Hopkins), **Rob Deardon** (University of Calgary), **Xihong Lin** (Harvard) and **Grace Yi** (Western). The second invited session focused on causal inference for big health data and the invited speakers who gave talks included **Caroline Uhler** (MIT), **Debashis Ghosh** (Colorado School of Public Health), **Erica Moodie** (McGill) and **Dylan Small** (U Penn).



The last place you might think of having fun these days is in a Zoom meeting, but host **Jim Rosenberger** got the Networking Happy Hour going right away and nearly thirty individuals got a chance to chat.

Saturday started right up again with a very interesting plenary address given by **Mary Thompson** (U Waterloo). The topic was *"The interface of health data science and survey methods."* This was followed by three invited sessions. The first was titled the "Late-Breaking Session: AI and Health Data Science" and rather technical talks were given by three distinguished statisticians, **Bin Yu** (UC, Berkeley), **David Buckeridge** (McGill) and **Rob Tibshirani** (Stanford).

The second invited session addressed "Statistical Problems in Imaging and Genetics" and talks by **Brian Caffo** (Johns Hopkins), **Radu Craiu** (University of Toronto), **Linglong Kong** (University of Alberta) and **Marina Vannucci** (Rice). This was followed by a fourth and final session on "Methods for Electronic Health Records (EHR) Data" highlighted by talks given by **Rebecca Hubbard** (U Penn), **Marc Suchard** (UCLA), **Eleanor Pullenayegum** (University of Toronto) and **Sherri Rose** (Stanford). Questions followed each session. After this last session the auditing of the algorithms used in AI and machine learning was discussed during the questions period.

The organizers and attendees all hope that collaboration between CANSSI and NISS continues into the future!

Don't forget to check out the Photo Albums for this event!

[Read the Full Story on the NISS website!](#)

RECENT NISS HOSTED EVENTS:

Ingram Olkin Forum Deliberates Bayes and Frequentist Approaches to Rescuing Disrupted Trials

When a study is disrupted by COVID-19, investigators are faced with the question of what to do next. Should they simply analyze the current data and reach a conclusion? If the trial is re-started with a new recruitment phase, is it permissible to change the target sample size or modify the statistical analysis plan in other ways? Our speakers during Day 6 of the Unplanned Clinical Trial Disruption series described some of the contrasting approaches in Bayesian and frequentist paradigms, and determined where the two approaches harmonized.

James Rosenberger (NISS Director) opened the day's session and Nancy Flournoy (Chair of the organizing committee, University of Missouri) provided a brief overview of the Unplanned Clinical Trial Disruptions series and the purpose of the Ingram Olkin Forums. The session's moderator and member of the organizing committee, Adam Lane (University of Cincinnati) introduced the speakers and their presentations for this session.

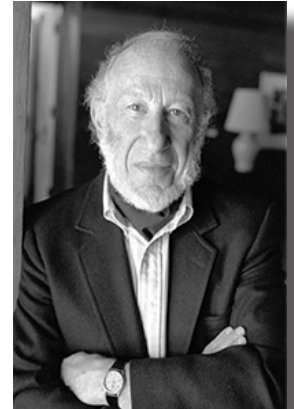
Our first speaker of the day, Cornelia Kunz, (Boehringer Ingelheim Pharma, GmbH) presented her talk on "Clinical Trials Impacted by the COVID-19 Pandemic: Adaptive Designs to the Rescue?" Cornelia provided useful insights on possible design adaptations and in which situations they can be helpful, and how to ensure type I error rate control (if required). By using a frequentist approach, Cornelia explained methods used to answer the question of whether to analyze the data that is available so far and stop the trial. She then described further details on approaches that are developed to resize a trial that has been affected by the pandemic.

The second speaker we had for this session was Gary L Rosner, (Director of the Quantitative Sciences Program and Biostatistics/Bioinformatics Division; Professor of Oncology, Johns Hopkins University). In his talk "Bayesian Statistics & Clinical Trial Disruption," Gary explored some applications of Bayesian inference to address questions that may arise when deciding how to deal with a disruption of a randomized clinical trial by a global pandemic. Using a hypothetical example trial, Gary discussed how one might apply Bayesian inference to help with decisions of continuation and analyses of trial data.

As the discussant for this session, Christopher Jennison (University of Bath) provided a hypothetical synopsis using both frequentist and Bayesian approaches and then compared the two outcomes.

The participants were then separated into two breakout room for discussions. The first breakout room was moderated by Lorenzo Trippa (Harvard T.H. Chan School of Public Health). The second breakout room was moderated by Richard Elmsley (King's College London.)

Synthesis and next steps took place after these discussions in hopes of creating a working group among the participants and promote research and collaborations on these topics.



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Serving
Society

THE NISS ACADEMIC AFFILIATE AWARD FUND - EXPLAINED

As we begin to see a few in-person meetings and conferences appear in our Upcoming Events listing, NISS thought that perhaps this is a good time to re-explain what the NISS Academic Affiliate Award Fund is and how it can be used.

The Academic Affiliate Award Fund was set up to help offset some of the expenses that individuals incur in attending meetings, conferences, talks and other professional activities that NISS sponsors. The annual NISS Academic Affiliate membership is \$3,000 (FY or CY). It is important to remember that 50% of this annual membership fee (\$1,500) is set aside by NISS so that it can be utilized **at the discretion of the Affiliate** to support professional activities and individuals in their department, including:

Affiliate hosted conference expenses when co-sponsored by NISS and/or travel expenses and registration fees for:

- NISS hosted events
- NISS co-sponsored events
- All CANSSI events
- All SAMSI events
- Statistical conferences at North American Mathematical and Statistical Institutes

Use Case: Jessica is a student and/or faculty at "ABC University" and her department is a NISS Affiliate. (*Don't know if your department is a NISS Affiliate? Check the [List of NISS Affiliates](#) on the NISS website.*) She would like to attend a webinar/tutorial hosted by NISS on Machine Learning and the registration fee is \$35. Jessica contacts her NISS Affiliate Liaison and asks if she can get reimbursed. The Liaison is usually the department chair or person designated by the chair. (*Don't know who your department NISS Affiliate Liaison is? [Check the NISS Affiliate listing](#).*)

She is given permission from her NISS Affiliate Liaison that she can be reimbursed through the NISS ABC University fund. She registers, pays for and attends the webinar/tutorial. After the entire event is over, Jessica downloads the [travel reimbursement form](#), fills in the registration amount, signs the form and gets the NISS Affiliate Liaison to sign it as well. Jessica emails this report and all/any receipts (legible please) as an attachment to officeadmin@niss.org who processes and USPS mails Jessica her reimbursement. Jessica could also email officeadmin@niss.org the completed form and clearly CC the Liaison stating she has their permission to be reimbursed. The email can then be added to the receipt PDF as "ABC University" approval.

Next time there is an event that looks interesting, remember your AAF is there to support you!

The National Agricultural Statistical Service (NASS) held its annual award ceremony on Wednesday, April 21, 2021. There were multiple individuals from NISS that were recognized for their exceptional efforts.

Farm Labor Team - Circle Award

Nathan Cruze (NISS Associate Liaison), **Lu Chen** (NISS Research Associate) and **Luca Sartore** (NISS Research Fellow)

Citation: *“For implementing new Farm Labor statistics requested by the Secretary of Agriculture.”*

County Estimates Modeling Implementation - Circle Award

Nathan Cruze (NISS Associate Liaison), **Lu Chen** (NISS Research Associate), **Habtamu Benecha**, **Bal gobin Nandram** (NISS Senior Mentor):

Citation: *“For implementing modeling approaches into production of official county estimates while demonstrating a high level of customer service from multiple divisions. This translates into the cost savings in terms of staff hours, improves the efficiency and quality of NASS products, and positively affects data users both within and outside the government.”*

Cooperator of the Year Award

Lu Chen (NISS Research Associate)

Citation: *“For outstanding contribution on improving the estimation processes for Farm Labor and Crops County Estimates programs, producing more efficient and transparent crops county estimates with CVs, and reducing the burden of the field office review.”*



“It was an honor to receive this award. It means that the agency approved and recognized my work during these two years. I really appreciate all the supervisors and team members who cooperate together to make such success. I joined NISS-NASS at the beginning of 2019 and I am actively involved in the NASS research team, especially in small area estimation projects.”

Lu Chen upon receiving this award.

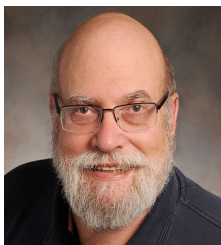
“Lu is absolutely deserving of this award. She is special because she can take the theory through development of methodology. Now she is succeeding in extending the work further, through implementation to real impact as the methodology is put into production for USDA reporting.”

Nell Sedransk, NISS Director-DC

NASS Hall of Fame Inductee: Phil Kott

The NASS Hall of Fame honors individuals who have made lasting contributions to the quality of information the National Agricultural Statistics Service collects and its mission of providing timely, accurate, and useful statistics in service to U.S. agriculture.

The Hall of Fame recognizes the talent, vision, and energy of individuals whose contributions to NASS and to agricultural statistics transcend time and continue to have impact. Individuals honored in the Hall of Fame exemplify integrity, honesty, innovation, and commitment to public service.



Sample excerpts from Phil's Citation:

“Phillip S. Kott, PhD, developed statistical theory and practice to advance the quality and accuracy of NASS statistics. Considered a leader in the statistical community, his contributions to the field helped bring major recognition and credibility to NASS. Phil began working at the agency in 1987 and served as its Chief Research Statistician from 1992 until his retirement from federal service in 2008. He is an expert in survey sampling theory and practice, including calibration weighting, multiphase sampling, the analysis of survey data, and variance estimation. ...

His most influential articles cover calibration weighting for unit nonresponse and coverage adjustments, one-sided coverage intervals, and various papers on variance estimation and the delete a-group jackknife. He is a fellow of the American Statistical Association (ASA), a member of the International Statistical Institute, and a fellow of the Royal Statistical Society. He received a Presidential Rank Award in 2007 and an ASA Section of Statistics and the Environment Distinguished Achievement Medal in 1997. He also received the 2017 National Institute of Statistical Sciences (NISS) Distinguished Service Award.

Phil is not only a talented statistician but a great coworker. He was patient with his peers and was always willing to take the time to explain things. He was very humble and would readily admit if an idea did not work. ... “

When asked how this recognition came about and his advice for those starting out their careers, Phil replied in part:

“I was able to teach myself all about this subdiscipline, and the arguments for and against, thanks to the Carter budget cuts and the decision of BLS to cut programs but not people. I taught myself survey sampling. Armed with that acquired knowledge I was eventually able to secure a position as a mathematical statistician at the National Agricultural Statistics Service (NASS), made myself indispensable, by providing simple and statistically defensible solutions to some of the problems faced by the agency. Equally important, I learned how to explain and document my answers. Moreover, I respected those who know more about agriculture, but less about statistics, than I did. This mutual respect meant that my ideas, which I always offered as suggestions, would not face the usual resistance that PhD ideas often encounter in government.

My work at NASS eventually led to my being inducted into their Hall of Fame for which I am boundlessly grateful. That would not have happened if what I had proposed had not met with understanding. The ideas themselves had merit, but merit alone is not enough in government without others to follow through on those ideas.”

NISS is extremely proud of these individuals for their accomplishments at NASS. Their work is obviously valued within NASS but also in the statistics community in general.

Congratulations **Lu Chen**, **Nathan Cruze**, **Habtamu Benecha**, **Bal gobin Nandram**, and most especially **Phil Kott!** Phil not only for his work with NASS but also for his continued active and valued participation through the years as a member of the NISS community.

Please join us in congratulating all of these individuals!!

[Read the Full Story on the NISS website!](#)

MAY

The Statistical Methods in Imaging Conference 2021

Event Date: May 17-19, 2021
Event Type: Online Conference

The Statistical Methods in Imaging (SMI) conference is the annual meeting of the American Statistical Association (ASA) Statistics in Imaging Section. The conference aims to bring together statisticians and imaging researchers working on methodology, theory, and applications in imaging science. The... ([read more](#))

The Statistics Debate II: Teaching Statistics or Data Science in Grades K-12?

Event Date: Wednesday, May 19, 2021 11:00 am - 12:45 pm ET
Event Type: Online Debate

Teaching Statistics or Data Science in Grades K-12? Where do YOU stand? debate questions to be revealed soon! If you are intrigued by these questions and have an interest in how these questions might be answered - one way or the other - then this is the event for you! Want to get a sense of the... ([read more](#))

COPSS-NISS COVID-19 Data Science Webinar Series

Event Date: Thursday, May 27, 2021 12-1pm ET (9-10am PT)
Event Type: Online Webinar

A Seat at the Table: The Key Role of Biostatistics and Data Science in the Pandemic ... (more info coming soon!)

Webinar Series: Mathematical Foundations of Data Science

Event Date: Friday, May 28th, 11am ET
Event Type: Online Webinar

The Role of Complexity Bounds in Optimization Speaker: Stephen Wright, University of Wisconsin, Madison Abstract: Complexity analysis in optimization seeks upper bounds on the amount of work required to find approximate solutions of problems in a given class with a given algorithm, and also lower... ([read more](#))

JUNE

COPSS-NISS COVID-19 Data Science Webinar Series

Event Date: Thursday, June 10, 2021 4-5 pm ET (1-2 pm PT)
Event Type: Online Webinar

Insights on vaccine hesitancy and healthcare inequity from a survey of millions of individuals in the US and worldwide ... (more info coming soon!)

NISS Graduate Student Research Conference

Event Date: June 12-13, 2021 12 - 5 pm ET
Event Type: Online Conference

The NISS Graduate Student Network is very excited to announce a two-day graduate student research conference! This two-day event will take place on June 12 and 13, 2021, from noon - 5 pm ET and will feature graduate student presentations, invited speakers and a social networking hour. Graduate... ([read more](#))

Check the [NISS Events webpage](#)
for up to date event info!

2021 Nonclinical Biostatistics Conference

Event Date: June 21-24, 2021
Event Type: Online Conference

Conference Theme: Nonclinical Statistics in the Age of Data Science
 The conference organizing committee welcomes you to the ASA-BIOP Nonclinical Biostatistics Conference! Registration for the 2021 NCB Conference is open! Take a look at the conference program ... ([read more](#))

COPSS-NISS COVID-19 Data Science Webinar Series

Event Date: Thursday, June 24, 2021 12-1pm ET (9-10am PT)
Event Type: Online Webinar

Aerosols and COVID-19 (more info coming soon!)

USCOTS 2021: Expanding Opportunities

Event Date: June 28 - July 1, 2021
Event Type: Virtual Conference

Registration is now open for the U.S. Conference on Teaching Statistics (USCOTS). This conference will be held virtually on June 28 - July 1, 2021, with pre-conference workshops starting on June 24. The conference theme is "Expanding Opportunities." Keynote presentations will be given by... ([read more](#))

JULY

Quality and Productivity Research Conference 2021

Event Date: July 26 - 29, 2021
Event Location: Virtual & In-person, Tallahassee, Florida,

Data Science and Statistics for Quality Hybrid Conference Given the uncertainty surrounding in-person meetings in the US and Florida, the QPRC 2021 organizers are planning to hold a hybrid conference. We will plan on having both in-person and virtual sessions and speakers. The goal of the... ([read more](#))

AUGUST

2021 NISS Writing Workshop for Junior Researchers (before & after JSM)

Event Date: August 6 & 13, 2021
Event Type: Workshop

Once again this very popular short course will be hosted by NISS. If you are a recent graduate of a doctoral program and want to improve your communication skills - then this event is for you!... ([read more](#))

OCTOBER

AISC 2021

Event Date: October 8 - 10, 2021
Event Location: Greensboro, North Carolina, 27412

International Conference on Advances in Interdisciplinary Statistics and Combinatorics The main objective of the conference is to promote interdisciplinary research involving statistical techniques. These techniques are becoming increasingly important in all fields of scientific discovery. A unique... ([read more](#))

Become a Sponsor of NISS Hosted Events!

NISS Invites corporations, institutions and individuals to sponsor events that are hosted by NISS. Sponsorship helps to defray the cost of organizing events and is a great way to give your organization visibility that targets statisticians and other related professions who attend NISS events! [Learn More!](#)

NISS CONTINUES TO WORK TO IDENTIFY TOPICS OF INTEREST TO STATISTICIANS FROM ALL DIFFERENT SECTORS AND THEN GATHER EXPERTS TO CONTRIBUTE TO A CONVERSATION THAT HELPS TO NOT ONLY INFORM BUT ALSO PROVOKE FURTHER THINKING ON THESE TOPICS. KEEP YOUR EYE ON THE NISS WEBSITE FOR FUTURE EVENTS THAT MIGHT BE OF INTEREST TO YOU OR YOUR COLLEAGUES!

AFFILIATES!

SEND YOUR JOB ANNOUNCEMENTS TO NISS!

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<https://www.niss.org/careers>

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