

Affiliates Update

OCTOBER | 2020

WELCOME!

This monthly Affiliates Update highlights upcoming NISS sponsored events.

PLEASE CIRCULATE THIS AFFILIATES UPDATE TO YOUR COLLEAGUES!

NISS sponsored events encourage cross-sector and cross-disciplinary networking. Let us know if you are planning an event and would like NISS to co-sponsor it. NISS affiliates can use their award funds to support these events or receive discounted registration. For more information about the NISS Affiliate program, see: <https://www.niss.org/affiliate-program-information>.

James Rosenberger, Director NISS

NEWS: INSIGHTS SHARED REGARDING ALGORITHMIC FAIRNESS IN SOCIAL CONTEXTS

September 25, 2020

Ingram Olkin advocated innovations in statistical methodology and data science that would promote new research and collaborations that would bring awareness to social issues and inform public policy. This session fits firmly within this purpose!

We all routinely receive browser ads, emails and text messages anticipating what we want or where we wish to go. Beyond simple marketing, we are learning that algorithms used in determining social policy, evaluation, and discoveries that involve or affect people have also become commonplace. Typically constructed by statistical and machine learning (ML) methods, artificial intelligence (AI) may harbor biases affecting individuals or subgroups of individuals in the society, resulting in questions of fairness and the implications for justice. The remarks of the speakers at this forum helped us understand the importance of bringing better understanding of fairness within these contexts.

The invited speakers on this topic were: Kush Varshney (IBM), Kristian Lum (University of Pennsylvania) and Alexandra Chouldechova (Carnegie-Mellon University).



Moderator: Claire Kelling (Penn State), Speakers: Alexandra Chouldechova (Carnegie-Mellon University), Kristian Lum (University of Pennsylvania), Kush Varshney (IBM).

The remarks of the speakers were followed by an active question and answer session that was moderated by Claire Kelling (Penn State University). The panelists were kept busy responding to questions from the 90+ attendees of the session. The back and forth between panelists captured the attention of everyone involved and made it clear that continued conversation on this and related topics is not only important, but necessary. Keep your eyes open for additional Ingram Olkin Forum Series sessions that continue to explore this topic!

[Read the Full News Story and](#)

[Review the Recording Now!](#)

FEATURED EVENT SERIES: ESSENTIAL DATA SCIENCE FOR BUSINESS TUTORIALS SCHEDULED THROUGH THE FALL

NISS announces a brand new series of tutorials on some of the most interesting topics in data science that are in use in business today!

Students and faculty, these are perhaps the top ten most important and practical topics that may not be covered in your program of study.

[The first overview session was presented by Victor Lo of Fidelity Investments \(review the recording of this session\).](#)

The [first tutorial on Data Science Workflows](#) has already passed. However, if you are a registered attendee of this tutorial or the entire series, or if you missed this live event, you can still receive the link to the recording, The titles of the 3 hour tutorials scheduled to be presented through the remainder of fall of 2020 are:

[October 21, 2020 - Lee Wilkinson: “Descriptive Analytics, Exploratory Data Analysis, and Data Visualization”](#)

[November 4, 2020 - Yanling Zuo: “Predictive Analytics and Machine Learning”](#)

[November 18, 2020 - Victor Lo & Dominique / Jonathan Haughton: “Causal Inference and Uplift Modeling”](#)

[December 2, 2020 - Ming Li: “Deep Learning”](#)

[Find Full Session Details on the NISS website!](#)

Essential Data Science for Business



The following tutorials are being scheduled beginning in the new year, 2021.

Winter 2021: “Prescriptive Analytics and Optimization”

Winter 2021: “Unstructured Data Analysis”

Winter 2021: “Social Sciences and Data Science Ethics”

Winter 2021: “Domain Knowledge and Case Studies”

Winter 2021 - Sam Woolford: “Analytical Consulting, Communication and Soft Skills”



The first five tutorial instructors; James Harner (West Virginia University), Lee Wilkinson (H2O), Yanling Zuo (Minitab), Victor Lo (Fidelity Investments), Ming Li (Amazon).

NEWS: NISS/MERCK MEETUP REVIEWS THE CHALLENGES AND POTENTIAL IN VACCINE DEVELOPMENT

September 16, 2020

It took until the end of the webinar. But someone finally asked the question that was probably on the minds of every one of the 250+ attendees at this meetup (and perhaps on the minds of countless more around the world!)

“When are we going to have a safe and effective vaccine?”

Yes, with the COVID pandemic having such a profound effect around the world, everyone is hoping for a highly protective and safe vaccine soon. Yet most have little understanding of the difficult road for discovery and development of a vaccine. The NISS/Merck Meetup that took place of September 16, 2020 was the latest in a long series of valued NISS/Merck meet-ups. This session focused on the challenges of vaccine development and novel ways those challenges can be met.

Three experts were brought together to talk about the latest in vaccine development.

Throughout the session the attendees posted questions for the speakers to address. Not only did the questions quickly get to the heart of the issues being discussed, the responses and back and forth between the speakers demonstrated their understanding of current developments, pointing out the deficiencies and obstacles to



Moderator: Dan Holder (Merck) Speakers: (left to right) Ivan Chan, (AbbVie Inc.), Joshua Chen, (Sanofi Pasteur), Marc Lipsitch, (Harvard University).

successful development, but also the importance of this work.

So, what were the speaker’s responses to the question, “When are we going to have a safe and effective vaccine?” General organizer and moderator of the session Dan Holder (Merck) made it clear that no one has a “crystal ball” but he did get each of the speakers to weigh in. Review the recording of the session and you’ll find out exactly what they had to say!

[Read the Full News Story and Review the Recording Now!](#)

OCTOBER

The Statistics Debate!

Event Date: October 15, Noon - 2 pm ET
Event Location: Online Webinar

Where do YOU stand? Given the issues surrounding the misuses and abuse of p-values, do you think p-values should be used? Do you think the use of estimation and confidence intervals eliminates the need for hypothesis tests? Bayes Factors - are you for or against? How should we address the... ([read more](#))

Webinar Series: Mathematical Foundations of Data Science

Event Date: October 16th, 12pm ET
Event Location: Online Webinar

Quasi Stochastic Approximation with Applications to Gradient Free Optimization and Reinforcement Learning Speaker Sean Meyn, (University of Florida) Abstract Soon after the publication of Watkins' Q-learning algorithm, it was recognized independently by Tsitsiklis and Jordan that the recursion... ([read more](#))

Essential Data Science for Business: Descriptive Analytics, Exploratory Data Analysis, and Data Visualization

Event Date: October 21, 2020 1-4 pm ET
Event Location: Online Tutorial

Data analysis today involves more facets than the traditional statistics curriculum covered even a few decades ago. Even simple descriptive summaries now include methods beyond the scope of the classical statistical estimators. Exploratory data analysis now incorporates... ([read more](#))

2020 Orange County ASA Biostatistics Symposium Series

Event Date: October 23, 2020, 1:00 - 2:30 PM Pacific Time

Data Science Analytics and Methodology in Biomedical Research and Clinical Trials. This is a webinar of the 2020 Orange County Biostatistics Symposium Series to present topics related to data science and analytics in biomedical research and clinical trials. The webinar has some interesting topics... ([read more](#))

Nancy Reid is Inaugural Myles Hollander Distinguished Lecturer

Event Date: October 30, 2020
Event Location: Online Webinar

The Department of Statistics at Florida State University is pleased to announce Nancy Reid, University Professor and Canada Research Chair in Statistical Methodology at the University of Toronto, as the inaugural speaker for its newly endowed Myles Hollander Distinguished Lecture. Reid will... ([read more](#))

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

NOVEMBER

Essential Data Science for Business: Predictive Analytics and Machine Learning

Event Date: November 4, 2020 1-4 pm ET
Event Location: Online Tutorial

Predictive Analytics and Machine Learning cover a large and highly varied arsenal of techniques. To make our precious 3-hour time together more productive and fun, we focus on three commonly used supervised machine learning techniques ... ([read more](#))

Webinar Series: Mathematical Foundations of Data Science

Event Date: November 6th, 11am ET
Event Location: Online Webinar

Statistical Learning in Operations: The Interplay between Online and Offline learning Speaker David Simichi-Levi, MIT Abstract Traditionally, statistical learning is focused on either (i) online learning where data is generated online according to some unknown model; or (ii) offline learning where... ([read more](#))

2020 Orange County ASA Biostatistics Symposium Series

Event Date: November 6, 2020 10 - 11:40 Pacific Time
Event Type: Online Webinar

Application of Statistical Inference through Data Science Techniques This is a webinar of the 2020 Orange County Biostatistics Symposium Series to present applications of data science techniques and tools to statistical inference making. The webinar focuses on various techniques such as machine... ([read more](#))

Fall 2020 Virtual Academic Career Fair - Finding a Position During the Pandemic

Event Date: November 11, 2020 12 - 1:30 ET
Event Type: Online Webinar

Nature recently published an article titled "Junior researchers hit by coronavirus-triggered hiring freezes" in June, 2020. () This raises so many questions! Are there academic departments that are hiring? How do you pursue a career as a statistician at an academic institution given the travel... ([read more](#))

Essential Data Science for Business: Causal Inference and Uplift Modeling

Event Date: November 18, 2020 1-4 pm ET
Event Location: Online Tutorial

In this tutorial, the concept of Uplift will be introduced. We will review existing methods, contrast with the traditional approach, and introduce a new method that can be implemented with standard software. A method and metrics for model assessment will be recommended. Our discussion will include new approaches to handling ... ([read more](#))

UPCOMING EVENTS, CONTD

DECEMBER

Essential Data Science for Business: Deep Learning

Event Date: December 2, 2020 1-4 pm ET

Event Location: Online Tutorial

In the past a few years, deep learning has gained traction in many application areas especially when non-traditional data sources are involved such as text and image. Deep learning methods now become essential tools in data scientist's toolbox. In this tutorial, we will first introduce general concepts in deep learning using feed forward neural network (FFNN). Then we will cover convolutional neural network... ([read more](#))

2021

13th Annual Conference on Statistical Issues in Clinical Trials: Cluster Randomized Clinical Trials (CRTs): Challenges and Opportunities

Event Date: Monday, April 12, 2021 - 8:30 am to 4:30 pm ET

Event Location: Philadelphia, PA

Conference Theme Cluster Randomized Clinical Trials: Challenges and Opportunities Save the Date! Registration opens January, 2021! ([read more](#))

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](#))



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The National Institute of Statistical Sciences (NISS) is an organization whose mission fosters cross-disciplinary research and advocates for statistical engagement in data science.

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