

ABOUT NISS

NISS SERVES AS...

NISS is a national institute that delivers high-impact research in science and in public policy on issues where information and quantitative analysis are keys to solutions and decisions.

STATISTICS - DATA SCIENCE HUB...

NISS brings Statistics and Data Science together in virtual – and now in-person !! – events that address the urgent issues for the discipline and for data as evidence for decision-making. Interdisciplinary conferences and workshops focus on deep probes of statistical issues and data science explorations at the core of inquiry and inference for science, social science and policy

EXPERT...

NISS serves as a neutral, objective expert or as an advisor to evaluate policy, to review organizations, to define the technical context for complex problems in government and in industry.

INDEPENDENT RESEARCH ORGANIZATION...

NISS also serves as an independent research organization, assembling state-of-the-art information and developing theory and methodology to solve problems of import to science or to policy.

COLLABORATOR...

NISS also acts as a convener, collaborator and hub for complex projects that require expertise from multiple sources whether these are drawn from academia, government, or private corporations.

FORUM FOR CONTEMPORARY ISSUES...

NISS creates and hosts short courses, discussions by panels of international experts, series of meet-ups, tutorials on advances in analytics, and open forums on critical issues for statistics from statistics curriculums at all levels to integration of heterogeneous data types originate at NISS as part of the NISS Affiliates Program to keep statisticians abreast of the latest advances.

EARLY CAREER RESOURCE...

NISS's Writing Workshops, career fairs for academic, government and industry sectors, and programs on expectations and career decisions are designed for statisticians and data scientists entering the profession. The NISS Graduate Student Network organizes a series of programs and annual conference to connect students before and after graduate school.

CONNECT



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Grad Student Network > niss.org/niss-graduate-student-network

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NATIONAL INSTITUTE OF STATISTICAL SCIENCES

Get to Know NISS

NISS is for...

Early Career Data Scientists
Researchers
Government Agencies
Corporations

Impact
Research

Affiliates Program

Statistics Serving Society

Research Resource for Profession

Data Science: Development, Application,
and Implementation

RESEARCH

NISS seeks out high impact problems focusing statistical theory, methodology innovation, and data science on complex issues to translate advances into implementation.

Research projects draw on NISS expertise in:

- Survey Sampling Theory
- Bayesian Design, Inference and Modeling
- AI for Data Exploration, Modeling and Prediction
- Time-Space Modeling
- High-Dimensional Statistical Computation
- Statistical Graphics and Data Visualization

Applications are broad-based: (some recent examples)

- Small Area Estimation
- Integration of Heterogeneous Data Types
- Biologic System Models
- Calibration
- Data Visualization
- Analysis of Process Data (Inference from Keystrokes)
- Images, Maps and Spatial Statistics,
- Simulation and Synthetic Populations
- Privacy and Data Security
- Epidemiology of Infections and of Events
- Meta-Analysis and Systematic Review

NISS senior mentors are nationally and internationally recognized leaders in the statistical and data sciences. Early career researchers work under their mentors' direction to develop innovative data science technology and statistical modeling methodology. The impact of this work appears through publication in leading statistical journals, presentations at international conferences and, most importantly, through implementation of results.

NISS early career researchers have created an impressive array of publications, presentations and research awards. Once again in 2022, all NISS researchers at NASS have won awards for their work, including both individual citations for excellence and for impact of their work and as technical leaders on team projects. Early career researchers at NISS or collaborating from their universities are publishing their work on NCES-sponsored NISS projects and education data in prominent journals in statistics and data science.

NISS multi-disciplinary mission is also achieved with technical forums on federal agencies' pressing needs for evidence-based policies and decisions. These NISS panels draw from all science, social science and engineering disciplines and from public and private sectors to identify data resources, analytics and paths to solutions. A library of reports covering 40 of these panels is posted on the NISS website. Research collaborations with NISS Affiliates, prompted by these technical forums, has recently included work on data visualization, spatial statistics, data integration, nonresponse bias.

EVENTS



NISS INGRAM OLKIN FORUMS

IOF forums focus on societal issues that might benefit from new or renewed attention from the statistical community:

- Unplanned Clinical Trial Disruptions
- Statistical Issues on Gun Violence,
- Algorithmic Fairness and Social Justice
- COVID and the Schools: Modeling Openings, Closings, and Learning Loss
- Statistical Privacy & Public Policy

Annual Deadlines are March 30 and September 30.



NISS PROGRAMS FOR AFFILIATES

NISS / Merck Meet-Up Series

Topics and issues of interest to biostatisticians, statisticians and epidemiologists related to the pharmaceutical industry.

NISS Data Science Essentials for Business Series

Tutorials that focus on the Top 10 analytics approaches for the key topics that are used in various business sectors.

NISS Virtual Career Fairs

Experienced statisticians from industry, government and academia talk about and provide advice for individuals interested in pursuing a career as a statistician.

NISS Webinars for Contemporary Issues

The Statistics Debates: Statistics vs Data Science + COVID-19 and the Role of Modeling + NISS The Use of p-Values in Making Decisions + NISS Digging Deeper Into p-Values + NISS/ASA Tutorial on Susceptible-Infected-Recovered (SIR) Modeling + Understanding Statistical Significance Central to Inference and Estimation + Teaching Statistics Online: Approaches, Strategies and Technologies + Bootstrap Methods and Permutation Tests + R & Spark Tools for Data Science Workflows

NISS Annual Writing Workshop for Junior Researchers (at JSM)

Every year, NISS gathers expert senior statisticians to mentor selected individuals to enhance their writing skills and communicate statistical data successfully! The goal of the workshop is to provide instruction for junior researchers writing journal articles and grant proposals.

EARLY CAREER

DATA VISUALIZATION SAID *IN GRAPHICS*

STATISTICALLY ACCURATE INTERACTIVE DISPLAYS



NISS holds a student data visualization contest for creating examples of how interactive data visualization techniques can be applied to enhance the data presentations in several public reports about education. Test your knowledge and skills in data visualization by entering our next competition!

NISS GRADUATE STUDENT NETWORK (GSN)

The goal of the NISS Graduate Student Network is to create connections among graduate students from different academic institutions within the NISS Affiliates Program. The GSN organizes activities to help students tackle challenges of graduate programs and help with their future careers. Students can share their experiences regarding their programs or an internship they did, and webinars and workshops can be organized around a topic of interest. The GSN's goal as a network is to create connections that last career-long.

NISS GSN Annual Research Conference

Present your research at the Graduate Student Research Conference! Winners receive an official certificate along with a cash prize!

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Are you at a NISS Affiliate?
Your department can join at...

