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NISS/SAMSI Affiliate Update

April 2012

NISS Events

Reminder: NISS/SAMSI Annual Affiliates Meeting
When: May 14-15, 2012
Where: Bureau of Labor Statistics, Washington DC

If you haven't already signed up for the NISS/SAMSI Affiliates Meeting, now is the time to do so! The meeting includes technical talks about the upcoming SAMSI year-long programs on Data-Driven Decisions in Healthcare and Statistical and Computational Methodology for Massive Datasets.

To sign up for the Affiliates Meeting, please click here.

Cell Suppression Workshop
When: May 14, 2012
Where: Bureau of Labor Statistics, Washington DC

The Cell Suppression Workshop will expose government agencies and the Affiliate community to best practices and software for cell-suppression-based disclosure limitation, with emphasis on methods for statistical analysis of data containing suppressions, and alternatives to cell suppression.

Attendance at this workshop is by invitation only; contact Lawrence Cox (cox@niss.org) if you are interested.

Co-Sponsored Events

Long-Range Dependence, Self-Similarity and Heavy Tails - International Conference in Honor of Murad S. Taqqu

When: April 19-21, 2012
Where: University of North Carolina, Chapel Hill, NC
ARA ELIGIBLE.
Details here.

Network of Greater Georgia Institutions for Neuroimaging and Statistics (NOGGINS) Workshop
When: April 20, 2012
Where: University of Georgia, Athens, GA
ARA ELIGIBLE.
Details here.

Southern Regional Council on Statistics Summer Research Conference
When: June 3-6, 2012
Where: Jekyll Island, GA
ARA ELIGIBLE.
Details here.

4th International Conference on Establishment Surveys (ICES IV)
When: June 11-14, 2012
Where: Montreal, Canada
Details here.

8th International Purdue Symposium on Statistics

Featured Affiliate - Yahoo! Research Laboratories

The mission of Yahoo! Research is to develop the world-class science that will deliver the next generation of businesses to the company.

The Yahoo! Research scientists focus on data-driven analysis, high-quality search, algorithms and economic models. Yahoo! manages many of the largest and richest data repositories in the world, and our researchers mine insights from these giant collections, individually and collectively, maintaining the privacy of our users while setting new standards for user value.

The company has an open culture of collaboration with peers from academic and research institutions. Yahoo! Labs feels like an academic setting with a focus on simultaneously publishing scientific work of the highest standard while driving a research agenda with significant impact on the company. For more information, click here.

Useful Links

NISS Website
SAMSI Website

"Diversity in the Statistical Sciences for the 21st Century"
Where: Purdue University, West Lafayette, IN
When: June 20-24, 2012
ARA ELIGIBLE.
Details here.

SAMSI Events

Uncertainty Quantification for High Performance Computing

When: May 2-4, 2012
Where: Oak Ridge National Laboratory, Oak Ridge, TN
The future designs of large petascale and exascale supercomputing systems will require a paradigm shift in the development of mathematical algorithms and theory. The field of computational uncertainty quantification will play a unique role in maximizing the knowledge that can be gained through the full utilization of these supercomputing systems. Key drivers to developing effective mathematical methods for these systems will be achieved through algorithms and theory that expose hierarchies of parallel work while minimizing the power cost of data movement and communication.

Speakers will address both theoretical and computation issues involved with UQ in high performance computing (HPC). Specific topics will include scalable algorithms for UQ, calibration, estimation and identification, and data-driven reduced order models for UQ. More **details here**.

Interdisciplinary Workshop for Undergraduates and Faculty

When: May 14-18, 2012
Where: SAMSI, Research Triangle Park, NC
This week long workshop will provide an introduction to the field of uncertainty quantification (UQ) for students and faculty from the mathematical and statistical sciences. The overall goal of the

workshop is to illustrate to need for and power of quantitative methods to confront important data- and model-driven scientific challenges. A limited number of faculty will be invited to attend a parallel workshop. While some lectures and the panels will be attended together with the students, most of the faculty activities will be conducted independently.
Details here.

Uncertainty Quantification Transition Workshop

When: May 20-24, 2012
Where: Radisson Hotel, Research Triangle Park, NC

This workshop is the formal end of the 2011-12 program on Uncertainty Quantification, but not the end of the collaborations and research that it has catalyzed. Presenters will review and discuss progress made so far in the various projects of the program, and discuss their significance and synergies. Future directions of research in the program areas will be assessed. The workshop will feature sessions from all active working groups and will bring together participants across the various areas of the program. **Details here**.

SAMSI's 2012-13 Programs

Program on Data-Driven Decisions in Healthcare

Opening Workshop: August 26-29, 2012
Where: Radisson Hotel, Research Triangle Park, NC

This program will address issues of mathematical and statistical theory and methodology that will improve evidence-based healthcare decision-making. The goals are to:

- Strengthen the link between data and decisions, a path that includes major challenges in mathematical modeling and statistical inference.
- Highlight and increase the role that statistics, applied mathematics and operations research can play in making data-driven healthcare decisions.

The program will have two principal—and intersecting—themes: Operations Research Modeling and Comparative Effectiveness Research. To learn more, **click here**.

Program on Statistical and Computational Methodology for Massive Datasets

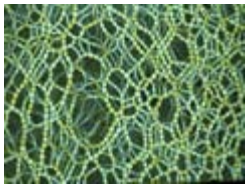
Opening Workshop: September 9-12, 2012
Where: Radisson Hotel, Research Triangle Park, NC

This program focuses on fundamental methodological questions of statistics, mathematics and computer science posed by massive datasets, with applications to astronomy, high energy physics, and the environment. Serious challenges posed by massive datasets have to do with "scalability" and "data streaming." Techniques developed for small or moderate-sized datasets simply do not translate to modern massive data sets. Data acquisition rates on the order of gigabytes per second necessitate innovative approaches towards computing environments, analysis and algorithms. For more information, **click here**.

SAMSI's Summer Programs for 2012-13

Summer Program on Nonlocal Continuum Models for Diffusion, Mechanics and Other Applications

When: June 25 - 29, 2012
Where: SAMSI, Research Triangle Park, NC



Participants in the workshop will discuss modeling, mathematical, statistical, computational, and applications issues such as kernel choices, connections between nonlocal continuum models and discrete models, well posedness of the equations, finite element and other discretization methods, efficient solution methods for discretized systems, uncertainty quantification and applications including mechanics, image processing, graphs, diffusion and wave propagation. **Details here.**

Summer Program on Computational Advertising

When: August 6 - 17, 2012
Where: SAMSI, Research Triangle Park, NC

The mathematical challenges that arise in computational

advertising include massive, high-speed linear programming, better agent-based models for auction dynamics, and the computational finance behind dynamic management of the sales portfolio. The statistical challenges include modeling and forecasting of trends among users, prediction methodology for recommender systems, and modeling the revenue streams. **Details here.**

NISS and SAMSI
P.O. Box 14006, Research Triangle Park, NC
www.niss.org and www.samsi.info