

NISS/SAMSI Affiliate Update

February 2015

Spring Affiliates Meeting in Miami

The [Spring Affiliates Meeting](#) will be held in conjunction with ENAR on March 15 in Miami, Florida. NISS will pay the air travel for one Affiliate liaison (primary or associate), plus one night's lodging for each primary liaison and for each associate liaison.

Confirmed speakers include:

- David Madigan, Columbia University
- Patrick Ryan, Janssen Research and Development
- Rima Izem, FDA
- Sally Morton, University of Pittsburgh
- Ruth Pfeiffer, National Cancer Institute
- John Eltinge, Bureau of Labor Statistics
- Michelle Dunn, National Institutes of Health

The tentative schedule is as follows:

Introduction and Opportunities

- Session 1: Research Presentations by NISS/SAMSI Postdocs
- Session 2: Panel on Effective Reviewers

Lunch

- Session 3: Opportunities and Challenges with Observational Data
- Session 4: Panel on Effective Leadership

Reception

The deadline to register is February 16. [Click here](#) for details and to register.

Co-Sponsored Events

G70: A Celebration of Alan Gelfand's 70th Birthday

When: April 19-22, 2015

Where: Durham, NC

[Details here.](#)

The 29th New England Statistical Symposium

When: April 24-25, 2015

Where: University of Connecticut

[Details here.](#)

CAUSE US Conference on Teaching Statistics

When: May 28-30

Where: Penn State Conference Hotel, State College, PA

[Details here.](#)

SAMSI Events

Multivariate Models in Ecology

When: March 2, 2015 - March 4, 2015

Where: Research Triangle Park, NC

Deadline to Apply: February 3, 2015
[Details here.](#)

Bioinformatics: Statistical Modeling and Analysis of Whole Genome Methylation and Chromatin Interaction (Epigenetics)

When: March 9-11, 2015
Where: RTP, NC
Deadline to Apply: February 10, 2015
[Details here.](#)

Bioinformatics: Discovering Patterns in Human Microbiome Data

When: March 16-18, 2015
Where: RTP, NC
Deadline to Apply: February 6, 2015
[Details here.](#)

Developing, Maintaining, and Employing Large Computational Frameworks for the Ecological Sciences

When: April 13-17, 2015
Where: Research Triangle Park, NC
Deadline to Apply: March 9, 2015
[Details here.](#)

Ecology Transition Workshop

When: May 4-6, 2015
Where: Research Triangle Park, NC
[Details here.](#)

Beyond Bioinformatics Transition Workshop

When: May 11-13, 2015
Where: Research Triangle Park, NC
[Details here.](#)

Undergraduate Modeling Workshop

When: May 17-22, 2015
Where: NCSU, Raleigh, NC
[Details here.](#)

SAMSI/SAVI Workshop on Time Series Analysis

When: May 25-31, 2015
Where: Pune, India
[Details here.](#)

Summer Program: Uncertainties in Computational Hemodynamics

When: June 1-3, 2015
Where: SAMSI, RTP, NC
Deadline to Apply: April 6, 2015
During this workshop, bio-engineers, mathematicians, medical doctors, physiologists and statisticians will work collaboratively toward the resolution of three significant challenges in the context of computational hemodynamics: (i) stochastic modeling, (ii) big data approach and (iii) relevance in the clinical setting. The three-day event is structured so that one day will be devoted to each challenge, with a mix of talks and brain storming sessions.
[Details here.](#)

Bayesian Nonparametrics Synergies between Statistics, Probability and Mathematics

When: June 29 - July 2, 2015
Where: SAMSI, RTP, NC
Deadline to Apply: May 4, 2015
Bayesian Nonparametrics (BNP) is a rapidly evolving area at the intersection of statistics, machine learning, probability and computer science. The focus is on modeling infinite-dimensional unknown objects that may consist of curves, surfaces, processes or probability measures. The goal of this four-day workshop is to bring together a group of leading researchers having different perspectives on BNP including "outsiders" working on related areas relevant to BNP, such as optimization and probability, with the goal of spurring new collaborative projects aimed at developing transformative new approaches and high impact scientific tools. [Details here.](#)

Industrial Mathematics & Statistical Modeling Workshop

When: July 12-22, 2015

Where: NCSU, Raleigh, NC

Deadline to Apply: April 15, 2015

Graduate students in mathematics, engineering, and statistics will be exposed to challenging and exciting real-world problems arising in industrial and government laboratory research. Students will also experience the team approach to problem solving. Students are divided into six-member teams.

[Details here.](#)

SAMSI's 2015-16 Programs

The following are the programs for 2015-16.

Challenges in Computational Neuroscience (CCNS)

The CCNS program will develop mathematical and statistical methods for neuroscience applications. These will be used to understand the underlying mechanisms that bridge multiple spatial and temporal scales, linking the activity of individual components (e.g., molecular biology, genetics, and neuron networks), and their interactions to the complex dynamic behavior of the brain and nervous system. Brain theory, modeling, and statistics will be essential to turn data into better understanding of the brain. The CCNS program will address the underlying methodological, theoretical, and computational challenges. Probability and statistics, dynamical systems, geometry, and computer science will be combined with respect to theory and in applications.

The opening workshop is scheduled for August 17-21, 2015. Go to the [SAMSI website](#) for details.

Program on Statistics and Applied Mathematics in Forensic Science (Forensics)

SAMSI's program on Forensics is focused on strengthening the statistical and applied mathematical foundations of forensic science. Forensic science is fundamentally based upon statistical comparisons of the characteristics of materials left at a crime scene to characteristics of possible sources or suspects. These comparisons are often acknowledged by forensic scientists to be highly subjective. A series of reports by the National Research Council (NRC) has raised deep questions about major forms of forensic evidence and has made a clear case for heeding statistical underpinnings for forensic procedures. Evidence from a crime include fingerprints, patterns and impressions (footprints and tire tracks), tool marks and firearms, hair, fibers, documents, paints and coatings, bloodstains, and fire debris. Working groups will focus on statistical issues for pattern evidence, for bias, for imaging, and for quality control for forensics laboratories. Crosscutting challenges are to identify where statistics can have a quick impact, and to educate mathematical scientists about forensics and forensic scientists about the mathematical sciences.

Opening workshop is August 31-September 4. Look at the [SAMSI website](#) for more details.

NISS and SAMSI

P.O. Box 14006, Research Triangle Park, NC

www.niss.org and www.samsi.info

