

NISS/SAMSI Affiliate Annual Meeting

Schedule

(HIBISCUS B on the Terrace Level, Hyatt Regency, Miami, FL)

8:30-9:00	Welcome Introductions and Opportunities (Nell Sedransk , NISS & Sujit Ghosh , SAMSI)
9:00-10:30	Session 1: Research Presentations by NISS/SAMSI Postdocs Chair: Sujit K. Ghosh , SAMSI and N.C. State University
9:00-9:30	Daniel Taylor-Rodriguez , SAMSI & Duke University <i>Selection and estimation for site-occupancy models</i>
9:30-10:00	Neung Soo Ha , NISS <i>Bayesian Inference for Population Prediction of Individuals without Health Insurance in Florida</i>
10:00-10:30	Hang Kim , NISS <i>Editing, Imputation, and Synthesis: A Public Use File for the Census of Manufactures</i>
10:30-11:00	Break

11:00-12:00	Session 2: Panel on effective reviewers (town hall style) Chair/Moderator: John Eltinge , Bureau of Labor Statistics Panelists: Michelle Dunn (NIH), Sujit Ghosh (SAMSI & N.C. State University), and Xihong Lin (Harvard University)
12:00-1:00	Lunch
1:00-3:30	Session 3: Opportunities and Challenges with Observational Data Chair: Christy Chuang-Stein , Pfizer
1:00-2:00	Patrick Ryan (Janssen Research and Development) and David Madigan (Columbia University): <i>Learning from observational databases: Lessons from OMOP and OHDSI</i>
2:00-2:45	Rima Izem (FDA): <i>Sentinel Journeys from Drug Safety Query to Regulatory Action</i>
2:45-3:30	John Eltinge (Bureau of Labor Statistics): <i>Discussion: What the Social Sciences Can Learn from OMOP and Related Methodology</i>
3:30-4:00	Break
4:00-5:00	Session 4: Panel of effective leadership (town hall style) Chair/Moderator: Tommy Wright , U.S. Census Bureau Panelists: Sally Morton (University of Pittsburgh) and Ruth Pfeiffer (National Cancer Institute)
5:15-7:00	Reception (HIBISCUS B ON THE TERRACE LEVEL)



Opportunities at SAMSI

Sujit K. Ghosh, Deputy Director

NISS/SAMSI Affiliate Meeting, Miami, FL

March 15, 2015



samsi
NSF • Duke • NCSU • UNC • NISS

SAMSI...WHO? WHAT?

- Started in 2002, as one of the eight NSF-DMS Math Institutes: www.samsi.info
- Consist of 4 partners: *Duke University*, *NISS*, *NC State University* and *UNC-CH*
- Housed at NISS/SAMSI building, RTP, NC
- Mission: “to forge a synthesis of the statistical sciences and the applied mathematical sciences with disciplinary science to confront the very hardest and most important data- and model-driven scientific challenges.”
- ***SAMSI is a formulator and stimulator of research in Statistics and Applied Math***

MAIN ACTIVITIES AT SAMSI

- **Research Programs**

- *Year long programs* (1-2 per year): Visitors for a few days to 1-2 semesters, Postdocs & Graduate fellows
- *Summer Programs* (1-2 per summer)
- *NSF-SAVI* (Science Across Virtual Institutes)

- **Education and Outreach**

- Undergraduate & graduate students
- Faculty in teaching colleges

RESEARCH PROGRAM HIGHLIGHTS

- Typically year long, 1-2 programs per year
- Each program starts with an *Opening Workshop* (Aug/Sep, consists of 150-200 participants)
- *Working groups* are formed that meet regularly during academic year (often via webex)
- *Mid-year program workshops* (2-3 days at SAMSI)
- Ends with a *Transition workshop* (May), working groups transition to new collaborations
- Participants:
 - Postdoctoral fellows (up to 6/year with assigned advisors)
 - Faculty visitors (short or long terms, often leaders)
 - Graduate students (with assigned advisors)

EDUCATION & OUTREACH HIGHLIGHTS

- **Undergraduate Programs:**

- *Modern Math Workshop* (Oct, 1.5 days): organized in partnership with SACNAS annual meeting
- *Fall research workshop* (Oct, 1.5 days): usually on a theme related to one of two programs at SAMSI
- *Spring research workshop* (Feb, 1.5 days): usually on a theme related to other program at SAMSI
- *Summer research workshop* (May, 5-6 days): Math and Stat modeling with hands-on activities at NCSU/SAMSI
- SAMSI provides funding for all students who are selected to participate
- All of these activities provide a pipeline of students in Statistics and Applied Math
- Check out: www.samsi.info/activities/education-and-outreach-workshops

EDUCATION & OUTREACH HIGHLIGHTS

- **Graduate Programs:**

- *Graduate Poster Presentations* (April): students presents updates on activities of theme programs
- *Industrial Mathematical and Statistical Modeling Workshop* (July, 9-10 days): students are engaged with projects lead by industry partners
- SAMSI provides funding for all students who are selected to participate
- All of these activities provide a pipeline of doctoral students in Statistics and Applied Math
- Check out: www.samsi.info/activities/education-and-outreach-workshops

RESEARCH PROGRAMS FY 2014-15

- **Beyond Bioinformatics: Statistical and Mathematical Challenges:** “...devoted to statistical and mathematical challenges arising in the analysis of genomic and related data with the goal of addressing relevant biological questions”

www.samsi.info/bioinformatics

- **Mathematical and Statistical Ecology:** “...brought together statisticians, mathematicians and theoretical ecologists – to study and develop the interactions among the different approaches to ecological modeling”

www.samsi.info/ecology

RESEARCH PROGRAMS FY 2015-16

- **Challenges in Computational Neuroscience**

- www.samsi.info/CCN (OW: Aug 17-21, 2015)
- Planning meeting took place at JSM
- Hongtu Zhu (UNC) is principal organizer
- Tom Witelski is SAMSI directorate liaison

- **Statistics and Applied Mathematics in Forensic Science**

- www.samsi.info/forensics (OW: Aug 31 – Sep 4)
- Planning meeting took place at SAMSI
- Cliff Spiegelman (Texas A&M) is principal organizer
- Nell Sedransk is SAMSI directorate liaison

POSSIBLE FUTURE PROGRAMS

- Optimization (2016-2017)
- Statistical, Applied Mathematical and Computational Methods in Astronomy (2016-2017)
- Mathematical and Statistical Challenges in Climate Science (2017-2018, *proposed*)
- Mathematical and Statistical Approaches to Uncertainty Quantification (2017-2018, *proposed*)
- Also summer programs
- Got an idea for workshops/programs???

PROPOSING A SAMSI PROGRAM

- www.samsi.info
- “Programs” (see list of past, present, future)
- Want to propose a new SAMSI program?
- Soliciting summer program proposals for 2016 and 2017
- pre-proposals for future full-year programs for 2017-18 and beyond
- www.samsi.info/programs/proposing-new-samsi-program

SAMSI STAFF



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Nell Sedransk
Associate Director
Interim Director of NISS



Tom Witelski
Associate Director

Upcoming Research Workshops

Spring Workshops:

- Discovering Patterns in Human Microbiome Data (HMD): March 16-18, 2015
- Developing, Maintaining, and Employing Large Computational Frameworks for the Ecological Sciences: April 13-17, 2015
- NIMBioS Graduate Workshop on Current Trends in Statistical Ecology: April 15-17, 2015
- 2014-15: ECOL: Transition Workshop: May 4-6, 2015
- 2014-15: Bioinformatics: Transition Workshop: May 11-13, 2015

Summer Workshops:

- SAMSI/SAVI: Indo-US Workshop on Time Series Analysis: May 25-30, 2015, Pune, India
- Uncertainties in Computational Hemodynamics: June 1-3, 2015
- Extreme Value Analysis: June 15-19, 2015
- Bayesian Nonparametrics Workshop: June 29 – July 2, 2015
- Computational Neuroscience Summer School: July 27-31, 2015

Fall Workshops:

- 2015-16: CCNS: Opening Workshop: August 17-21, 2015
- 2015-16: Forensics: Opening Workshop: August 31-September 4, 2015

POSTDOCTORAL POSITIONS FY 2016-17

- SAMSI is seeking up to 6 postdoctoral fellows for either of the two SAMSI Research Programs for 2016-17: **Optimization and AstroStatistics**
- Appointments, for up to 2 years, will begin in August 2016
- Competitive salaries, travel stipend and health insurance
- To apply, go to www.mathjobs.org, SAMSIPD2016 Job #???? (***deadline Dec 15, 2015***)
- More details at:
www.samsi.info/opportunities/post-docs