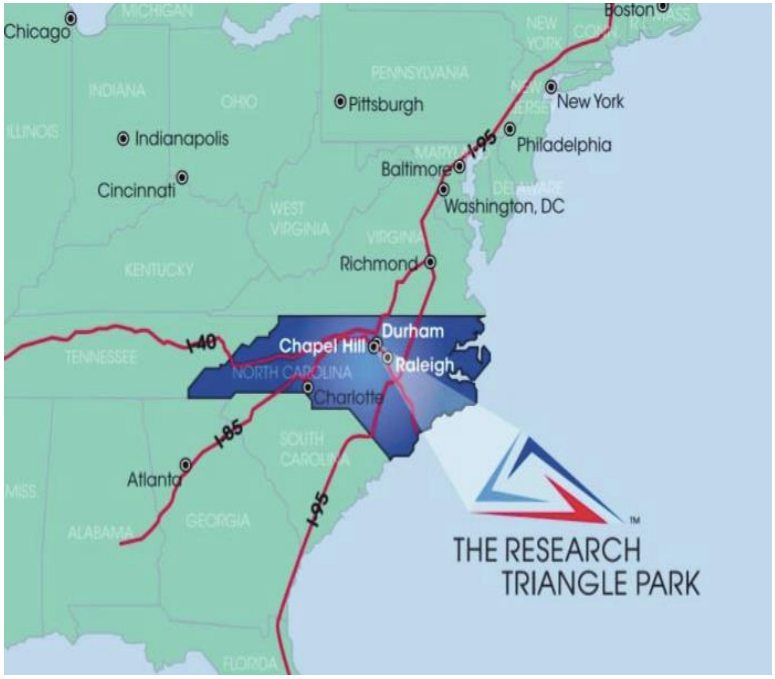
samsi
NSF•Duke•NCSU•UNC

Sujit K. Ghosh
Deputy Director

The Statistical and Applied Mathematical Sciences Institute

WHAT IS SAMSI?

- One of 8 NSF funded Math institutes
- A NSF grant awarded to Duke, NCState, and UNC



samsi
NSF•Duke•NCSU•UNC

WHAT IS SAMSI?

Established in 2002

Current NSF funding period: 2012-2017

samsi
NSF•Duke•NCSU•UNC

SAMSI'S MISSION

- 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
NSF•Duke•NCSU•UNC

NEWS

- NSF has recommended renewal of SAMSI for funding period 2017-2020
- Searching for new Director and Deputy Director
- Moving to new (nearby) building in July

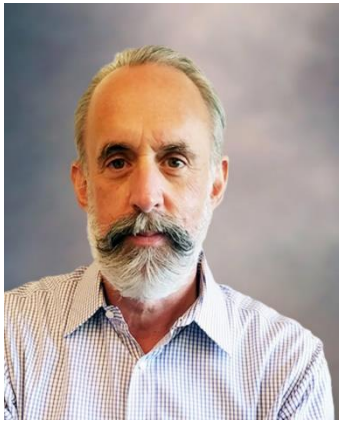
samsi
NSF•Duke•NCSU•UNC

SAMSI DIRECTORATE

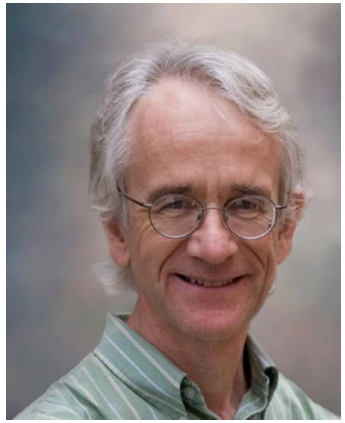
Sujit Ghosh
Deputy Director

Ilse Ipsen
Associate Director

Tom Witelski
Associate Director



Gordon Campbell
Operations Director



Richard Smith
Director

samsi
NSF•Duke•NCSU•UNC

WHAT CAN SAMSI DO FOR YOU?

- Research

  Year-long programs

  Summer programs (1-3 weeks)

  Topical workshops

- Education and Outreach

  Graduate student modeling workshop

  Undergraduate workshops

samsi
NSF•Duke•NCSU•UNC

RESEARCH PROGRAMS

Year-long collection of focused research activities

- Working groups (remote access)
- Research workshops
- Summer schools
- Participants
  - Visitors (few days – a year)
  - SAMSI Postdocs & Graduate Fellows
  - National and international participants

samsi
NSF•Duke•NCSU•UNC

Current SAMSI Programs 2016 - 2017

Optimization

samsi
NSF Duke NCSU UNC NISS

SAMSI 2016 - 2017
Program on Optimization

This year-long research program aims to produce a synergy between Mathematics and Statistics to produce ground breaking advances in:

- Optimization for large-scale statistical analysis
- Statistical approaches for the numerical solution of large-scale optimization problems
- Applications of optimization

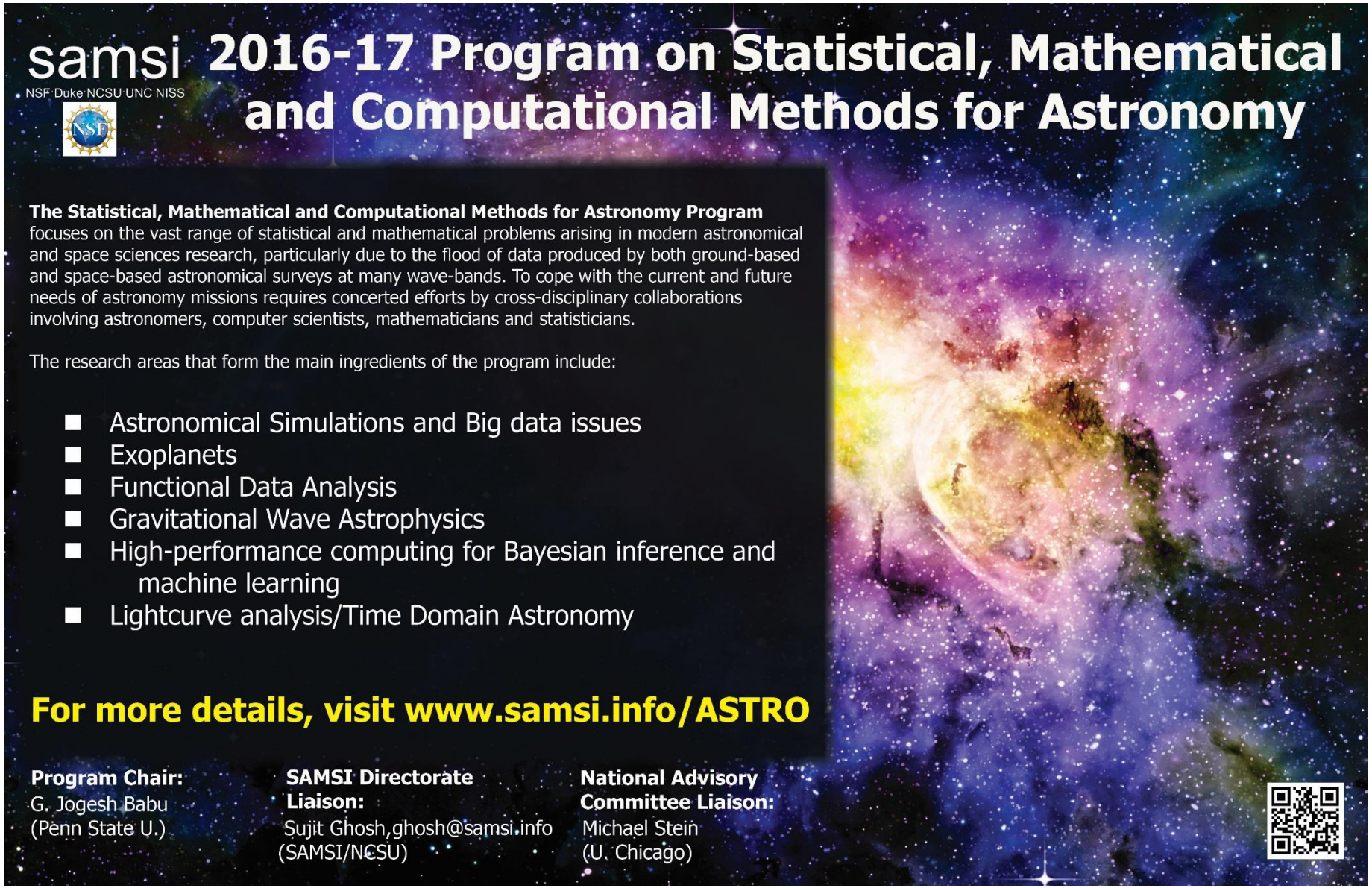
Opening Workshop: 22-26 August 2016
2-year postdoctoral fellowships
1-2 semester research fellowships

SAMSI Directorate Liaison
Ilse Ipsen (NCSU)

National Advisory Committee Liaisons
Michael Mahoney (UC-Berkeley)
Habib Najm (Sandia National Labs)

Go to www.samsi.info/OPT for details.
Send questions to: opt@samsi.info

Statistical, Mathematical & Computational Methods of Astronomy

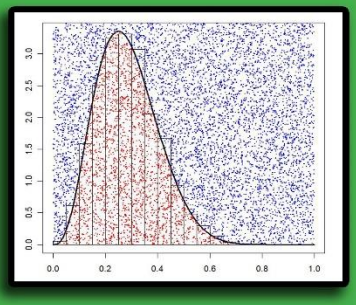


Future SAMSI Programs 2017 - 2018

Quasi-Monte Carlo & High Dimensional Sampling Methods for Applied Mathematics

samsi
NSF•Duke•NCSU•UNC

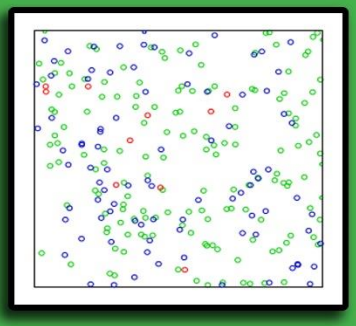
SAMSI 2017 - 2018 Program on Quasi-Monte Carlo and High-Dimensional Sampling Methods for Applied Mathematics

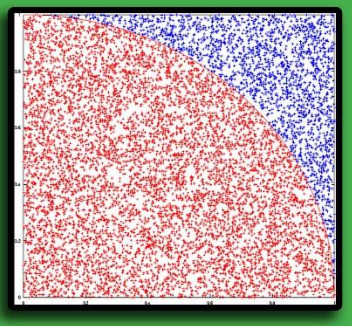


The goal of the SAMSI program is to explore the potential of QMC and other deterministic, randomized and hybrid sampling methods for a wide range of applications.

Opening Workshop: August 28 - September 1, 2017
2-year postdoctoral fellowships
Research Fellowships

Visit: ***www.samsi.info/qmc*** or email: ***qmc@samsi.info***





Program Leaders:
Art Owen (Stanford University)
Fred Hickernell (Illinois Institute of Technology)
Frances Kuo (University of New South Wales, Australia)
Pierre L'Ecuyer (Université de Montréal, Canada)

SAMSI Directorate Liasion:
Ilse Ipsen (N.C. State University)

Mathematical and Statistical Methods for Climate & Earth Systems

samsi
NSF•Duke•NCSU•UNC

SAMSI 2017 - 2018 Program on Mathematical and Statistical Methods for Climate and Earth

This year-long research program will study the interrelations among climate data, climate models and impacts with a view towards projecting future climate change and its impact on earth systems and the human population. Specific topics for working groups are expected to include:

- Remote sensing and climate databases
- Parameter estimation in climate models
- Climate Informatics
- Climate Extremes
- Climate and Health

AND MORE...

Opening Workshop: August 21-25, 2017
2-year postdoctoral fellowships
Research fellowship opportunities

Steering Commitee:
Chris Jones (UNC-Chapel Hill)
Doug Nychka (National Center for Atmospheric Research)
Brian Reich (NCSU)

SAMSI Directorate Liaison:
Richard Smith (UNC-Chapel Hill)

FUTURE RESEARCH PROGRAMS

2018-19:

- Model Uncertainty: Mathematical & Statistical (confirmed)
- Precision Medicine (confirmed)

2019-20:

- Causal Inference (under consideration)

samsi
NSF•Duke•NCSU•UNC

EDUCATION & OUTREACH

Three undergraduate workshops per year, one graduate

27-28 February 2017
Undergraduate Workshop

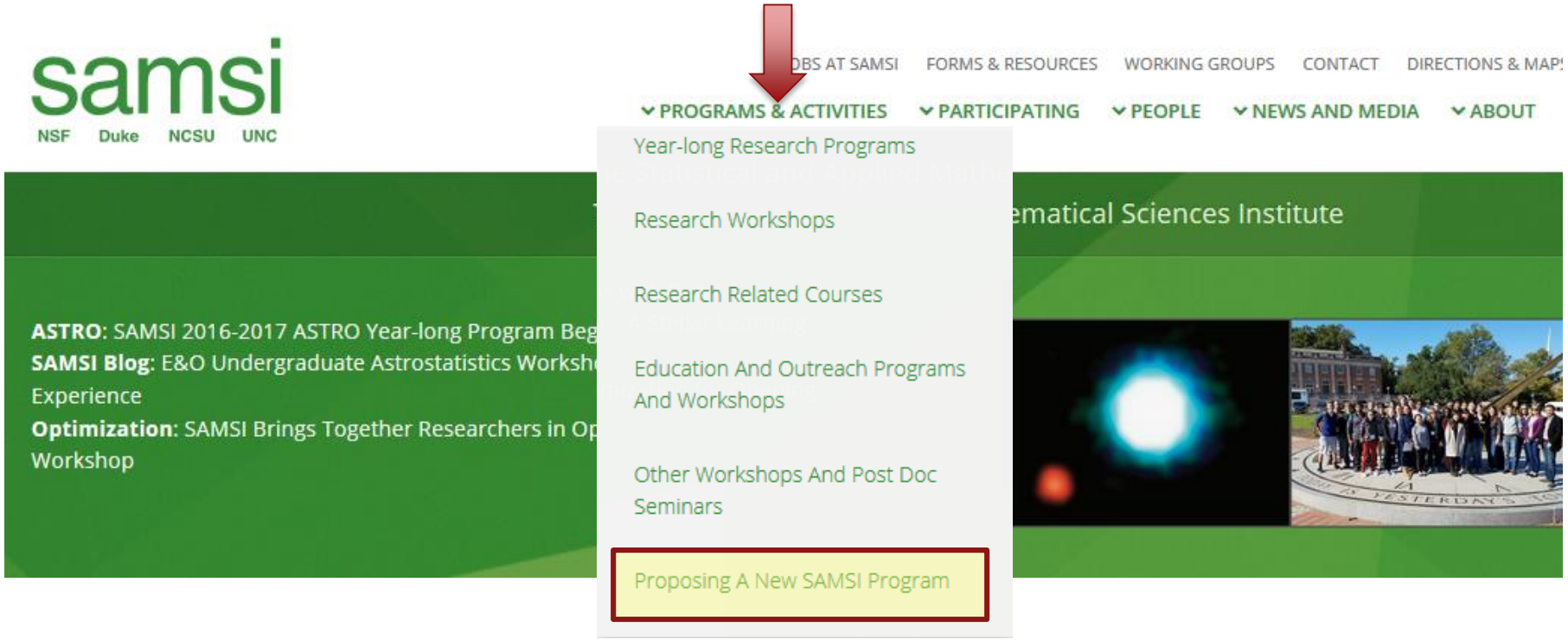
14-19 May 2017
Undergraduate Workshop (Interdisciplinary)

16-26 July 2017
Graduate Student IMSM Workshop

samsi
NSF•Duke•NCSU•UNC

Proposing a SAMSI Program

https://www.samsi.info



samsi
NSF•Duke•NCSU•UNC

SAMSI SPONSORS PROGRAM

- Academic departments
- Research laboratories
- Businesses

Sponsorship funds help SAMSI to provide services not covered by NSF grant:

- Child care
- Field trips for undergraduate workshops
- Hardware + software for postdocs
- Social events (poster receptions)

Web page: SAMSI.info//Support SAMSI

samsi
NSF•Duke•NCSU•UNC

SAMSI STAFF

Karem Jackson
Workshop Specialist

Sue McDonald
Workshop Coordinator

Rita Fortune
Financial Analyst

Rick Scoggins
Communications Director

Thomas Gehrmann
NCSU Program Assistant

samsi
NSF•Duke•NCSU•UNC

Communications & Marketing Minute!

- We **NEED** you to help tell the SAMSI Story!
- **SAMSI Social Media Platforms:**

https://twitter.com/SAMSI_Info

https://www.facebook.com/SAMSI.Info

- **SAMSI Blog:** https://samsiatrtp.wordpress.com/
- Take plenty of pictures and enjoy this event!
- **DON'T FORGET TO USE #WISO when talking about this WISO Workshop on Social Media!**
- **Communications questions:** communications@samsi.info

#SAMSI Does

samsi
NSF•Duke•NCSU•UNC