

NISS

The NISS Affiliates Program:
Furthering Collaborations Between
Industry/Government and Academe

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Outline

- Program overview
- Membership summary
- Principal activities
- Examples of collaborations
- Where is the program going?

Program Mission

To conduct activities and services encompassing *dissemination, education, research, professional development and the formation of relationships* that simultaneously deliver high value to affiliates and support the missions of NISS and SAMSI.

Program Components

- NISS
- SAMSI = Statistical and Applied Mathematical Sciences Institute (www.samsi.info)
- NISS Affiliates Program
 - Corporations, Federal agencies, National labs
 - \$10K/year (\$5K for small corporations)
 - \$2.5K/year → Affiliates Reimbursement Account
- NISS/SAMSI University Affiliates Program
 - University departments; can be shared on same campus
 - \$3K/year
 - \$1.5K/year → Affiliates Reimbursement Account

NISS Affiliates

- **Corporations:** Avaya Labs, Aventis, General Motors, GlaxoSmithKline, Golden Helix, Icagen, Merck & Company, MetaMetrics, Pfizer, RTI International, SAS Institute, SPSS, Telcordia Technologies
- **Federal Agencies:** Bureau of Labor Statistics, Census Bureau, National Agricultural Statistics Service, National Center for Education Statistics, National Center for Health Statistics, National Institute of Standards and Technology, National Security Agency
- **National Labs:** Los Alamos National Laboratory, Pacific Northwest National Laboratory

NISS/SAMSI University Affiliates

Carnegie Mellon (Statistics), Duke (Mathematics + Institute of Statistics and Decision Sciences), Emory (Biostatistics), Florida State (Statistics), Georgia (Statistics), Illinois (Statistics), Iowa (Statistics), Iowa State (Statistics), Johns Hopkins (Applied Mathematics & Statistics), Maryland (Mathematics), Maryland Baltimore County (Mathematics and Statistics), Michigan (Statistics + Biostatistics), Missouri-Columbia (Statistics), North Carolina State (Mathematics; Statistics), North Carolina at Chapel Hill (Biostatistics; Mathematics; Statistics & Operations Research), Oakland (Mathematics & Statistics), Ohio State (Statistics), Pennsylvania State (Statistics), Rice (Statistics), Rutgers (Statistics), Southern Methodist (Statistical Sciences), Stanford (Statistics), Texas A&M (Statistics), UCLA (Statistics + Statistical Consulting Center)

Principal Activities—1

- Information Dissemination (all ARA eligible)
 - Technology Days (1 day; early access to NISS research and software)
 - Recent: High Throughput Screening, Proteomics, Internet Tomography, Data Confidentiality
 - Upcoming: Pharmacogenomics, ...
 - Workshops (> 1 day)
 - Upcoming: Statistical Risk and Counterterrorism (co-sponsored), Total Survey Error, Overarching Issues in Risk Analysis
 - Short Courses (no fee; up to \$1500 for non-affiliates)
 - Recent: Computer Experiments, Validation of Mathematical Models and Computer Simulation for Product Development
 - SAMSI Events
 - Program workshops: Kickoff, mid-year, final
 - Hot topics workshops

Principal Activities—2

- Human Resources
 - Job Listings (AJL)
 - Federal agency postdocs
 - Agency funds and hosts
 - NISS recruits and appoints
 - Access to current and ex NISS postdocs seeking employment
 - SAMSI
 - Program participation, ranging from leadership to visits to workshop attendance

Principal Activities—3

- Formation of Research Relationships
 - Annual Problem Day, to catalyze collaborative research
 - Proposal Development Fund
 - Cover expenses other than PI time associated with preparation of cross-disciplinary, preferably multi-institution
 - Up to 2 awards/year; up to \$10K each
- Networking
 - March Planning Meeting (included in program membership)
 - JSM Lunch

Principal Activities—4

- Co-sponsored events
 - Eligible for ARA
 - EURANDOM workshops
 - QPRC, MMR, ...
- Others
 - Affiliates Reimbursement Accounts
 - Publicity

How Affiliates Benefit

- Attention to problems in the “industry/government academe” gap
 - Payoff too remote to justify hard attention, problem too inchoate for many academics
 - Examples: data quality, data confidentiality
 - Model: NISS serves as interface, formulating (theory and methodology) issues to be addressed by academe
- Recruiting
- Access to NISS and SAMSI leadership
- Engagement with each other

How NISS and SAMSI Benefit

- Input from affiliates that informs scientific directions
 - NISS: data quality, model validation, bioinformatics
 - SAMSI: DMML (2003-04), Social Science (2004-05), National Defense and Homeland Security (2005-06)
- Visibility
- Community service

Examples of Collaborations

- Data confidentiality
 - NISS, BLS, BTS*, Census, NASS, NCES, CMU, Duke, ISU, SMU
- Data quality
 - NISS, BTS*, EPA*, Duke [+DQRI]
- Model validation
 - NISS, GM, LANL, Duke, NCSU
- Bioinformatics
 - NISS, Golden Helix, GSK, ICAGEN, Duke, NCSU, UNC [+ Abbott, Metabolon]
- FAA postdocs
 - Census, EPA*

Future Directions

2005: The Year of the Affiliate

- Visits to as many affiliates as possible
- Increase the number and diversity of affiliates
- NISS-Affiliates “compact” articulating
 - Value provided by NISS to the affiliates
 - Expectations of the affiliates
 - Ways in which NISS and the affiliates will work together to make the program a long-term success
 - How the program is “governed”

Potential Initiatives

- Annual affiliates survey
 - Follow-up to March Planning Meeting
- Events at affiliates' sites
- Quarterly updates on NISS research
- Increased affiliate contact with postdocs
- Expand AJL to include graduate students and postdocs
- Wider range of summer activities at SAMSI

The Affiliates Programs in the Long Run

- Program structure
 - 20 Corporate, with 3-4 “clusters” defined by shared interests
 - 12 Federal agency and national laboratory
 - 50 University departments
- Impact on NISS
 - 50% of research brought to NISS by affiliates or others
- Impact on SAMSI
 - 1+ SAMSI program every 2 years that arises from and reflects affiliates’ interests and engagement

A Parting Thought

“The NISS affiliates program is like National Public Radio: you belong because you *should* belong.”