NISS

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Report: NISS Affiliates Planning Meeting

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NISS Headquarters, Research Triangle Park, NC

1 Summary

The annual Planning Meeting of the NISS Affiliates was held on March 1, 2002, at NISS headquarters in Research Triangle Park, NC.

Present were David Banks (Food and Drug Administration), Kevin Coakley (National Institute of Standards and Technology), Lawrence Cox (National Center for Health Statistics), Stephen Eick (Visual Insights), Alan Forsythe (Amgen), Nancy Flournoy (American University), Carol House (National Agricultural Statistics Service), Tailen Hsing (Texas A&M University), Alan Karr (NISS), Jon Kettenring (Telcordia Technologies), James Landwehr (Avaya Labs Research), Russell Lenth (University of Iowa), Brent Pulsipher (Pacific Northwest National Laboratory), Jeffrey Robinson (General Motors), Avi Singh (Research Triangle Institute), Keith Soper (Merck & Company), Jackson Stenner (MetaMetrics), Yves Thibaudeau (Census Bureau), Lynn Weidman (Bureau of Transportation Statistics), Robert Wolpert (Duke University), Tommy Wright (Census Bureau), and Stanley Young (GlaxoSmithKline).

2 Program Review

Following a welcome and participant introductions, Karr reported on activities, recent initiatives and plans for the Affiliates Program.[1] Major points:

1. A two-dimensional conceptualization of the Affiliates Program, in terms of *groups of affiliates* — corporations, government agencies, national laboratories and universities — with complementary but overlapping needs, and *program activities* — research stimulated by and in collaboration with affiliates, professional development (e.g., postdoctoral programs), information dissemination and exchange (e.g., Technology Days) and networking.

[1] The presentation and other meeting related materials are available at www.niss.org/affiliates/planningmeeting200203.html.

2. A review of ongoing and proposed affiliate-related research, which addresses *Data Confidentiality* (the current Digital Government (DG) project, involving BLS, Census, NASS, NCES and NCHS; the DG II proposal involving, in addition, BTS and Purdue), *Data Quality* (initial projects with BTS and EPA, and the DG II proposal), *Computer Model Evaluation* (GM, Duke) and *Web Data* (exploratory work with Visual Insights leading to a proposal to NSF's Information Technology Research competition).

3. Professional development initiatives: NAIP — the NISS Affiliates Internship Program, with five employers, twenty applicants and two placements to date, and the Federal Agency Affiliate Postdoc Program (with one appointment in place and a second in process).

4. For information dissemination and exchange, Workshops in 2001 on Pharmacogenomics and Network Data, the newly created *NISS Affiliates Technology Days* (The first, on February 28, 2002, addressing Data Quality, with others planned on Data Confidentiality (May, 2002) and High Throughput Screening.) and *Short Courses*, the first of which, in Fall, 2002, will be on Computer Model Evaluation. In the future, *workshops* sponsored by the Statistical and Applied Mathematical Sciences Institute (SAMSI) (see §3) will become a significant component of this activity.

5. Networking opportunities that include two Affiliates meetings per year (the annual planning meeting, supported by membership fee, at NISS in March and JSM meeting, this year on Sunday, August 11), the Affiliates Job Listing Service (www.niss.org/affiliates/ajls.html), the NISS (starting this year, NISS/SAMSI) JSM reception (to be held on Monday, August 12) and Affiliates Program events such as Technology Days.

6. New program benefits, specifically, support for participation in events such as Workshops Technology Days *at either NISS or SAMSI* ($2500 per year for corporate, government, and national lab affiliates and $1500 per year for university affiliates) and allowing university memberships to be shared among departments on the same campus (with benefits shared as well).

7. Issues raised in the course of an evaluation of the Affiliates Program conducted by the NISS Board of Trustees Affiliates Committee:[2] workshop follow-up; NISS as a focal point for "continuing education on cutting edge topics;" that NISS should view program in terms of science, not dollars; geographically dispersed events; and formation of affiliate affinity groups.

In closing, Karr noted that the long term goal of the program is to deliver high value to affiliates on a continuing basis. This will be abetted by additional leadership for the program resulting from the current search for an Associate Director of NISS, one of whose principal responsibilities is expected to be the Affiliates Program.

[2]Members are A. Carriquiry (IA State U), L. Denby (Avaya), B. Godfrey (NCSU), L. Wilkinson (SPSS) and G. Williams (Bristol-Myers Squibb), who is chair.

Discussion occurred throughout the presentation.

3 SAMSI

With the assistance of Thomas Banks (NCSU), Karr outlined the vision, structure, and 2002–03 plans for SAMSI,[3] with particular focus on:

- Opportunities for individuals from the statistical sciences community at levels from established researchers to undergraduate students to participate in SAMSI programs.
- The relationship among NISS affiliates, NISS and SAMSI. Specifically, SAMSI will not have affiliates of its own, so that NISS affiliates will be affiliates of both institutes. (The new program benefits noted in §2 support this strongly.) In addition, NISS provides its affiliates a direct path to propose and participate in SAMSI programs, as well as receive resultant new technologies. For example,[4] as NISS develops software toolkits to aid affiliates in assessing data quality, issues of theory and methodology for inference from poor quality data will be raised, many spanning multiple contexts. SAMSI, in response, could organize a program that leads to new theory and methodology, which affiliates personnel could lead or participate in. Finally, NISS could serve as a technology transfer path, through which affiliates implement SAMSI-catalyzed theory and methodology.

4 $2 + \varepsilon$ Minute Madness

Every attendee took (approximately) two minutes to describe concerns, needs and capabilities of his or her organization that are relevant to the Affiliates Program. Corporate, government and national lab affiliates concentrated on research — recurring themes were data quality, data confidentiality, spatial data, large data sets/data mining, and Web data — and personnel needs, while university affiliates emphasized the capabilities and interests of their faculties.

5 Breakout Discussions and Reports

Reflecting the review by Karr (§2), hour-long breakout discussions were held, structured by Affiliates Program activities. They were followed by reports to the full set of attendees and associated discussion.

Information Dissemination and Exchange/Networking. Kettenring listed a number of suggestions from the group:

[3] Additional information about SAMSI is available at the SAMSI Web site: www.samsi.info, which is also linked from the NISS home page.

[4] This example is illustrative.

- A Web site containing a "most wanted list" of hot problems contributed by Affiliates;
- A NISS-sponsored JSM session, along the lines of $2 + \varepsilon$ Minute Madness (§4), presenting affiliates' research problems;
- A Technology Day on grand challenge problems;
- Interesting data sets posted on the NISS Web site;
- NISS-originated "Webinars;"
- Presentations at universities by NISS postdocs on their work at NISS.

Research. Banks described research needs that might be addressable (or at least merit investigation) by NISS or SAMSI:

- Homeland security;
- Data mining (for example, in a data quality context);
- Response rates in Federal surveys;
- Inverse problems such as image analysis and pattern recognition, that differ from the emphases of the first-year SAMSI program;
- Web data, extending ongoing NISS work to include customer behavior;
- Cyber-security;
- Sequential decision problems in novel contexts, such as drug development.

Dissemination of results of NISS research and SAMSI programs in such venues as *Statistical Science* was urged.

Professional Development. Karr reported briefly on a discussion of shared postdoctoral appointments between NISS and corporate affiliates, noting both opportunities (e.g., leveraging of related interests) and potential pitfalls (e.g., work involving proprietary data).