Update from StatSNSF Subcommittee

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Presentation from
Iain Johnstone, Co-Chair,
April 18, 2013

The Task

From Ed Seidel's August 14, 2012 letter to MPSAC:

"that MPSAC form a subcommittee to examine the current structure of support of the statistical sciences within NSF and to provide recommendations for NSF to consider"

Committee Roster

Math. Sciences Community		
Co-chair	Fred Roberts	Rutgers
Co-chair	Iain Johnstone	Stanford
Ex-off	Jim Berger	Duke
MPS/SIAM	Irene Fonseca	CMU
	Beth Chance	Cal Poly
IMS	Tom Kurtz	Wisconsin
	Peter March	Ohio State
AMS	Robert Bryant	Berkeley/MSRI
ASA	Mary Ellen Bock	Purdue
MAA	Lloyd Douglas	Greensboro

NSF Advisory Committee reps.		
SBE	Ken Bollen	UNC
CISE	Alex Szalay	JHU
OCI	Victoria Stodden	Columbia
GEO	Mary Barth	NCAR, CO
EHR	Bill Schmidt	Michigan State
BIO	Jonas Almeida	UAB
ENG	Alison Flatau	UMD

NSF Liaison		
NSF	Claudia Rankins	

Statistical Science-> Data Science

NSF STRATEGIC PLAN   2011-16, p. 4:

"From *the social sciences to the life sciences to the physical sciences to education, vast amounts of data...are transforming how scientists, engineers, and educators approach complex problems. To meet these challenges, NSF will continue to support the creation of new algorithms, software, and networking and storage capabilities, as well as the development of tools...*"

"*Data Science:* the science of *planning, acquisition, management, analysis* of, and *inference* from data"
                              [working definition]

Working Group Structure

Groups A:

- CISE/OCI/ENG
- GEO/BIO/SBE
- MPS/HER
- **Disciplinary challenges**
- **Existing NSF programs**
- **Management structures**

Groups B:

- Non NSF Programs
- Community
- Workforce Development

- Regular conference call structure
- May 3 plenary call to start on recommendations

Request for input

Themes raised by ADs:

Multidisciplinarity	Roles of Data
Big Data	Tool vs. Fundamental Research
Validity and Trust	Sustainability of Data
Data Challenges	Management, Storage, Archiving
Evidence-based Decision Making	Workforce Preparation

Additional issues for feedback:

Fragmentation of data science support	Additional funding initiatives
Research on Reproducibility	Duplication of methods
….?	