

Members Reports – Eric Feigelson

Philanthropic foundations in computational astronomy:

Astronomy receives more private philanthropic support than most science fields, such as the Sloan Digital Sky Survey, Allen Telescope Array and the Discovery Channel Telescope. I can highlight two recent substantial cases associated with HPC/Big Data in astronomy:

- **Moore-Sloan Data Science Environment** \$38M, 2014-18, NYU/UC-B/UW. Astro, bio, social sciences. *‘This bold new partnership—a coordinated, distributed experiment involving researchers at these three leading universities—hopes to establish models that will dramatically accelerate the data science revolution. While data science is already contributing to scientific discovery, substantial systemic changes need to be overcome to maximize its impact on academic research.’*
- **Simons Foundation Center for Computational Astrophysics** Just beginning, Princeton’s David Spergel Director, first 15 Fellows appointed, ~60 total ongoing appointments expected. Will probably cover both Big Data (large astronomical surveys) and Big Theory (large astrophysical simulations). Emphasis on science rather than programmatics.

Two astroinformatics meetings in October 2016 illustrate the current interests of the research community:

- 26th Astronomical Data Analysis & Software System (**ADASS XXVI**, ~350 participants from 23 countries mostly on 2 continents, Trieste IT). ADASS has leaders of major telescope software projects (programmatic) concentrating on software project & archive management, archives, data models & algorithms, Python software, distributed computing. Strong presence of ESA but less NASA.
- International Astronomical Union Symposium *Astroinformatics* (**AstroInfo16**, ~160 participants, 31 countries on 5 continents, Sorrento IT). AstroInfo16 is the first meeting sponsored by international scholarly societies (IAU, IEEE). Topics algorithms, parallel/cloud, CPU/GPU, databases, etc. with emphasis on ground-based observational astronomy. Little overlap in attendance between the meetings. No NASA participation.