

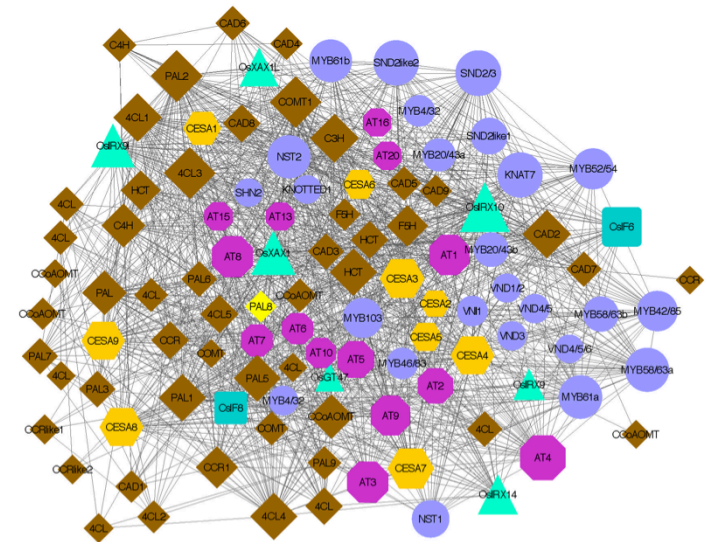
Enhancing Big Data Scholarship and Education at OU

Laura Bartley, Ph.D.

lbartley@ou.edu

Microbiology and Plant Biology

CAS Big Data Faculty Fellow



College of Arts and Sciences: Big Data Initiative

“The size and scale of data, which can be overwhelming today, are only increasing.”

–2014 U.S. National Academy of Sciences



Ingo Schlupp
Associate Dean for
Research
schlupp@ou.edu

- **Need:** Needs for computational skills and data analysis are ever increasing. It seems likely that most college graduates and all college postgrad students will need to learn to develop these skills during their careers.
- **Goal:** Improve capacity and education for analysis of large datasets across disciplines. Stimulate research to grow impact.



Components of Big Data Analysis and Archiving:

While data generation may be discipline specific, working with data may not be.

- Computational skills
- Statistics/Analytics
- Visualization
- Management: Policy and Logistics
- Courses/learning opportunities related to the above



Phase I (2016)

- **Internal Analysis.** Thoroughly survey and summarize assets and needs with respect to Big Data components in CAS, particularly, but also across OU and the region. Begin analysis of fundable teams.
- **External Analysis.** Strategically survey and summarize institutional structures or other programs for supporting big data analysis and education. Institutions that have recently created systems may be particularly useful. Include survey of funding strategies.
- **Present Options.** Develop strategic alternatives for how CAS can support improvements in Big Data education and research capacity.
 - Institutional structures: new department or sub-department, center
 - Graduate certificate and/or degree program
 - Undergrad curriculum (class offerings and requirements: altered requirements, gen ed, domain-specific or general) and/or degree



Phase II (2017)

- **Implementation.** Prioritize and provide continued guidance for implementing needed changes.
- **Funding Opportunities.** Identify gaps/needs that represent research and funding opportunities. If possible lead proposal development or identify and support an appropriate leader.



Cataloging Resources, Capacities & Needs

Capacity	Resources	Scholarship Grad Ed, Undergrad Ed
Software/Programming	Software Carpentry	S,G,U
	R in Biology	G
	Python	G
Hardware	OSCER	S,G (U)
Statistics & Analysis	MATH, BIOL, and PSYCH courses	U, G
	Stats and R seminar	S, G, U
	Data Science and Analytics MSE	G
	Management Information Technology (MS-business)	G
Logistical Support	IT?	
Intellectual Community	? But see ResBaz	S, G, U



Process

- Big Data Community Meetings
 - Interested faculty, staff, and students from CAS and OU = YOU!
- Big Data Advisory Committee
 - Small, committed group--meets monthly in addition to Community Meetings
 - Representation from all disciplines
 - Inform my activities
 - Comment on capacity and options report(s)
 - Advise on implementation



Data Analysis Community Building!



Research Bazaar, Feb 2-4, 2016

University of Oklahoma, Bizzell Library, HCLC Lower Level 1

Skills Sharing – Digital Literacy – Research Collaboration

2nd Link in search for ResBaz at OU home page

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Please contact Ingo or me with [suggestions](#) or [questions](#).

Stay tuned for announcements related to the Big Data Community and join our advisory and networking events.

Please be in touch if you would like to serve on the OU-CAS Big Data Advisory Committee!

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