Custom Services and Tools for Computational Science and Technology

William Mischo, Mary Schlembach, Camilla Fulton, Elizabeth German, Josh Bishoff

University of Illinois at Urbana-Champaign

Grainger Engineering Library Information Center

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Background

- Impetus: New Service Models proposal.

- Focus on interdisciplinary areas that cut across UIUC departmental libraries.

- Identified needs through discussions with faculty and graduate students, suggestions.

Digital Science

- New triad: digital science, theory, experimentation.
- Digital Science: five complementary elements:
  - Collection of data from physical world;
  - Distributed & remote access to local an centralized repositories of such data;
  - Computation using theoretical models and experimental data;
  - Presentation of results for visualization & interpretation;
  - Support for collaboration among scientists.

Scholarly Communication

- Need for libraries and librarians to be involved at basic level of SC.
- One –Stop-Shopping approach to SC.
- Our point of intersection:
  - Connections between literature & data;
  - Tools for publication and grants;
  - Custom search/discovery services;
  - Data preservation/curation;
  - Metadata and OIA-PMH distribution mechanisms;
  - dynamic linking.

Services

- Digital Object Identifier (DOI) custom locator for one-off extraction.

- DOI insertion into EndNote files for grant applications and citation management.

- Custom metasearch application allowing limit by computational science descriptors/controlled language.

- Summary of Engineering Research and BibApp.

- Custom computational science faculty pages with pre-loaded Google News searches, pre-constructed metasearch queries, and portlet to computational science search.