The Center for Research Data and Digital Scholarship at the University of Colorado Boulder

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Outline

• The partnership behind the center
• Our organization
• Our infrastructure
• Our support
• Deeper dive
  • Digital Humanities Graduate Certificate
  • Data management
• Future plans
Interdisciplinary data-intensive research + Collaboration

= CU Center for Research Data and Digital Scholarship (CRDDS)

[Link](http://colorado.edu/crdds/)

Partnership between Libraries and Research Computing
Research center application and approval (2016)
Our mission

• Support of data-intensive research
  • Infrastructure
  • Data management
  • Training
  • Education
  • Consulting
  • Proposals
  • Partnerships

CRDDS team (2018)
Benefits of collaboration in Center

• Broad reach across campus
• Expertise across the disciplinary spectrum
• Greater than the sum of our parts
• Examples
  • Interdisciplinary data consult hours
  • Publishing of large data sets (multiple TB)
  • Support of graduate course in computational literary analysis in English
Center achievements

• Center space (Norlin E206) (2017)
• Digital Humanities Graduate Certificate launch (2017)
• NSF CC* Cyberteam award (2017)
• Interdisciplinary training (2017)
• Interdisciplinary data consult hours (2018)
• NSF CC* Hybrid Cloud award (2019)
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Our leadership

- Executive Directors
  - Approve annual budget and resource allocation
  - Approve annual center plan
  - Advocate for the center with campus leadership and external partners
  - Liaise with Executive Board
  - Grants

- Initiative Directors
  - Lead and manage initiative activities
  - Manage initiative budget and resource allocation
  - Prioritize projects
  - Develop and implement initiative strategic plans

Andrew Johnson, Research Data Management
Jonathon Anderson, Cyberinfrastructure
Nickoal Eichmann-Kalwara, Digital Scholarship
Thea Lindquist, Libraries
Thomas Hauser, Research Computing
Shelley Knuth, Education and Training
Andrew Johnson, Research Data Management
Shelley Knuth, Education and Training
Our governance structure

• Executive Board
  • CIO, Dean of the Libraries, Associate Deans for Research
  • Approve new initiatives and discontinuation of initiatives
  • Approve changes to governance structure and by-laws
  • Recommend strategic directions
  • Advocate for the Center

• Advisory Board
  • Faculty members, students, postdocs
  • Bring diverse perspectives into the work of the Center
  • Raise awareness of Center activities and goals
  • Serve as ambassadors and advocates for the Center
Campus partnerships

- Laboratory for Statistical Analysis (LISA)
- Center for Teaching and Learning
- Exploring Digital Humanities speaker series
- Digital Scholarship on the Front Range
- Research and Innovation Office
- Earth Lab
- Center to Advance Research and Teaching in the Social Sciences (CARTSS)
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Data Architecture

- RStudio and Matlab through OpenOnDemand
- Command line access as well

Data from Instruments and other sources

- Parallel Filesystem High-performance
- Blanca dedicated computer
- Hybrid cloud
- RMACC Summit Supercomputer

PetaLibrary Storage System
- Store all the data the project produces

ScienceDMZ network architecture

Data Transfer through Globus

Data Sharing via Globus

Data access through Globus links

Publishing data via CU Scholar repository

Open Science

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UNIVERSITY OF COLORADO BOULDER
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Training and consulting

- 1000+ attendees last year at trainings and other events
- ~500 consults at data consult hours and by appointment
  - Coding
  - Data analysis, visualization, and management
  - Research computing
  - Digital Humanities
  - Statistics

Training in Norlin E206
Events and community building

• Speakers and symposia
• Informal talks and seminars
• Student data visualization contest
• Community mixers
  • Research and Innovation Seed Grant mixer
  • Municipal data mixer

Data visualization contest winners (2018)
WHAT IS A FEMINIST LAB?

home

The "What Is a Feminist Lab?" Symposium will take place at the University of Colorado Boulder in Norlin Library N410 on April 17-18, 2019. Co-organized by Maya Livio, Lori Emerson, and Thea Lindquist, the event will examine the recent proliferation of labs, surveying the lab landscape and exploring ways in which intersectional feminist approaches can be integrated into labs and the work they do. “What is a Feminist Lab?” will also bring lab leaders and collaborators from across the U.S. and Canada into dialogue with representatives from many of the university’s interdisciplinary labs.

whatisafeministlab.online
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Digital Humanities graduate certificate

- Launched in Fall 2018
- Administrative home in Center as discipline-neutral space
  - Lindquist certificate director
- 9 credits + optional 1-3 credit capstone
- Ranked in top half of graduate certificates campus wide its first year
- More info: colorado.edu/crdds/dhgc
Certificate coursework

• Core course DHUM 5000: Introduction to Digital Humanities
  • Taught by Eichmann-Kalwara

• Proposal for low-barrier graduate GIS course
  • Taught by our CLIR Postdoc in Geospatial Data Services

• Working on stackable 1-credit course options in collaboration with CARTSS
Data management

- Curation and DOI registration for 219 data sets in the CU Scholar institutional repository in first year
- DataCite DOI agreement with National Solar Observatory (NSO) and Laboratory for Atmospheric and Space Physics (LASP)
- CoreTrustSeal repository certification in collaboration with National Center for Atmospheric Research (NCAR)
- Data Publishing of large data sets
  - Metadata in CU Scholar linked through Globus to data sets on PetaLibrary
- Support of very large proposals
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Grants and initiatives

• NSF CC* Cyber Team: Creating a Community of Regional Data and Workflow Cyberinfrastructure Facilitators, $1,497,820

• NSF Hybrid Cloud award “CC* Compute: A Hybrid Cloud Environment for the Rocky Mountain Advanced Computing Consortium”, $399,532 + $100,000 in cloud credits

• Research Data Lake project

• IMLS Interdisciplinary Data Curation grant proposal

• ARL Digital Scholarship Institute advisory group proposal

• HathiTrust Research Center spring workshop proposal
Future Plans

- Center renewal in 2020-2021
- Support for science gateways and portals
- Support for campus data science initiatives
- Long-term data preservation for large (several TB) data sets
- Research data governance
- Micro-credentials for our trainings
- New interdisciplinary data-focused credit courses
Questions?

Norlin Library
Opportunity in the CU Boulder Libraries

• Assistant Dean of Digital Strategy & Information Technology Services
  • [https://www.colorado.edu/libraries/jobs-opportunities/assistant-dean-digital-strategy-information-technology-services](https://www.colorado.edu/libraries/jobs-opportunities/assistant-dean-digital-strategy-information-technology-services)
  • Open until Jan. 5th