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Open Data, Open Science and applications for academic libraries

Perspectives from STEM Libraries at Florida State University

Presented by: Dr. Nick Ruhs and Renaine Julian

Overview

Defining open science and open data

Research data management

Teaching data information literacy

USEDit

Undergraduate research in open science

Moving forward

Open Science

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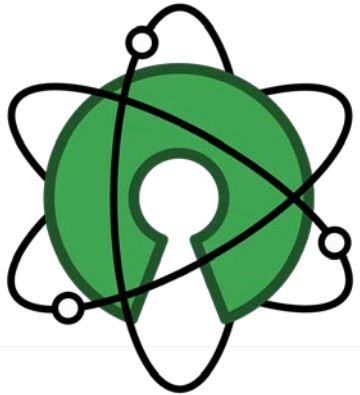
Open science is the movement to make scientific research and its dissemination accessible to all levels of an inquiring society, amateur or professional.

Open science is transparent and accessible knowledge that is shared and developed through collaborative networks



Woelfle, M.; Olliaro, P.; Todd, M. H. (2011). "Open science is a research accelerator". *Nature Chemistry*. **3** (10): 745–748. doi:10.1038/nchem.1149

BILL & MELINDA GATES *foundation*

ALFRED P. SLOAN FOUNDATION

Data Management Planning

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Assist with writing required 2-page data management plans

Workshops for graduate students and faculty

Partnerships with: Office of Research, Graduate School, Research Computing Center, and others

Beyond data management plans

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Leverage credibility gained through DMP consultations

Questions beyond current level of expertise

Development of lab protocol

OPEN Government Act

Created by Sergey Krivoy
from Noun Project

STEM Everyday Data workshop series

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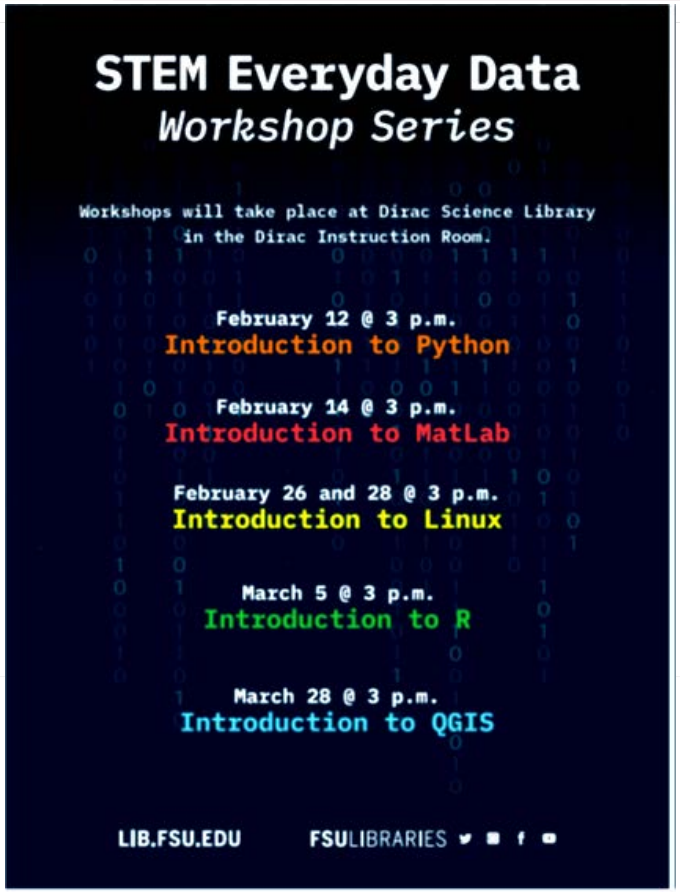
- Introductory workshops on data analysis and visualization software used by researchers
- Focus on openly available software
- Attendees included undergraduate and graduate students, and faculty



Workshop Collaborations

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- Collaborators:
  - FSU Research Computing Center
  - FSU Libraries Office of Digital Research & Scholarship
- Collaborating allowed us to take advantage of internal and external data expertise and increase our workshop offerings
- Partnering with FSU Libraries marketing team allowed us to increase community engagement

USEDit

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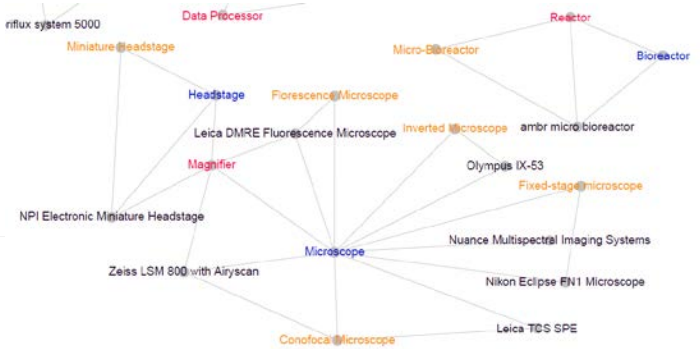
- Universal Scientific Equipment Discovery Tool
- Structured citation style or method for scientific lab equipment used in publications or grant applications
- Unique universal identifier
- Links out to standardized set of equipment information
- Will be openly available to students, researchers, and the community

USEDit
UNIVERSAL SCIENTIFIC EQUIPMENT
DISCOVERY TOOL

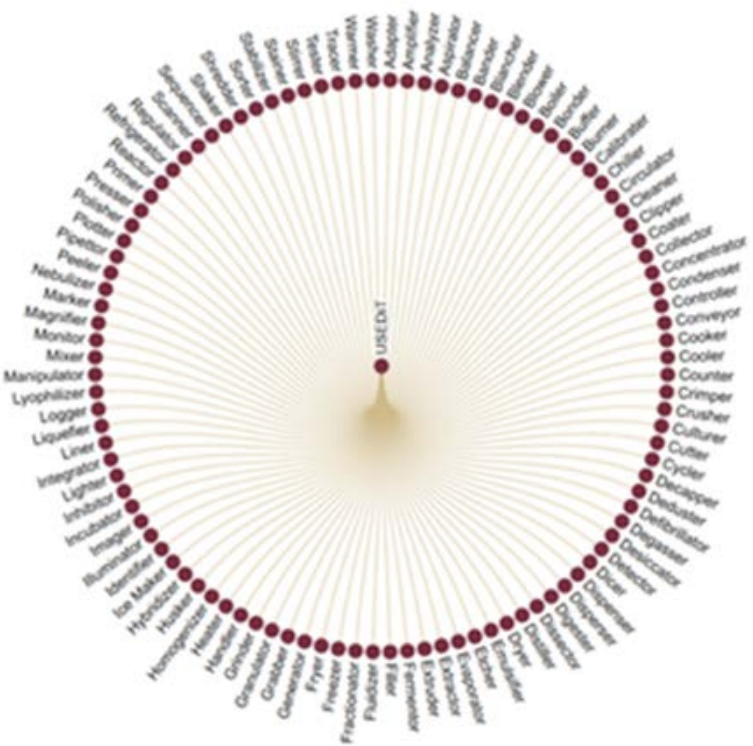
Benefits of USEDit

- Increased reproducibility of experimental results
- Accurate tracking of equipment being utilized to conduct research
- Allows researchers to discover new relationships between equipment and research, increasing the potential for collaboration
- Allows for the productivity of research equipment to be quantified



USEDit team

- Interdisciplinary collaboration
  - Biophysics faculty member
  - Science Librarians
  - Metadata Librarians
  - Library Associate Dean
- Combination of Expertise
  - Scientific Research
  - Information Specialists
  - Taxonomies and Ontologies



Other open data initiatives

LD Base

- NIH Funded
- Collaboration with Psychology dept

UROP Open Science

- Two undergraduate researchers and librarian
- Explore how scientific data is being used outside of academia

FSU researchers receive $3M to create national repository for data on learning disabilities

BY: **DAVE HELLER** | PUBLISHED: **JANUARY 24, 2019** | 10:30 AM | SHARE:

Sara Hart, associate professor of psychology, will lead a project with FSU Libraries to build the nation's first-of-its-kind big-data repository at Florida State. The project is funded by a $3 million grant from the National Institutes of Health.

Growing forward

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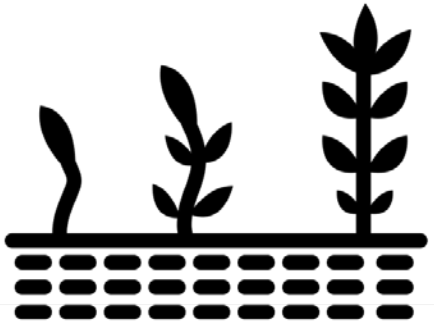
Focus group assessing campus data needs

Campus data advisory board

Deepening RDM services

- Lab level support
- Project level support



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Questions/Comments

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