

MICHIGAN STATE UNIVERSITY
SPARTANS WILL.

New Faculty, Academic Staff & Teaching Assistants Orientation

TECHNOLOGY ORIENTATION

19 AUGUST 2019, 10AM – 3PM
@ THE MICHIGAN STATE UNIVERSITY LIBRARY

Today's program

Lightning presentation round

10-12pm, Green Room

Teaching in MSU classrooms, Library Teaching & Learning Services, Creating Digital Experiences, Library Research Services, Data Management for Research, High performance computing, IT Services research support

LUNCH... LUNCH... LUNCH... LUNCH... LUNCH... LUNCH... LUNCH... LUNCH... LUNCH... LUNCH... LUNCH... LUNCH... IN THE GREEN ROOM

In-depth Exploration and Conversation

1-3pm Digital Scholarship Lab

Demos in VR Room, 360 Room, Hollander MakeCentral, REAL room (3 West)
Tables setup for detailed Q&A on topics – get your passport stamped!

Staff on hand to help with laptop setup & questions





iCER / HPC

- HPC consultation
- iCER compute services
- Cool tools like Jupyter and Hadoop!
- Free and paid tiers of service

Much more!

- IRB/HRPP, ORA
- UURAF
- CSTAT, BRIC, long list of centers on campus...
- The Hub – design space and undergrad research projects

IT Services

- General consulting
- Data management plan implementation
- Cloud compute, virtual desktop
- Software (including Office 365) and laptops
- General datacenter hosting
- Security review & secure storage options
- GIS and other data sources
- Networking (EDUROAM, i2)

Under the umbrella of VPRI

Library

- Data management plan consulting and repository
- MakerSpace, AR/VR
- Map Library
- Digital Humanities
- Special Collections
- Research publications access
- Book publishing

Hardware and room configuration

REAL rooms and team spaces

Confidence monitors
iClickr (interactivity)

Cameras for checkout or built-in (listed in 25 Live)*

Catch box mics*

Document Camera

Software and services

Learning Management System (D2L), SIS

Office 365 – PowerPoint, Teams, OneDrive, Prezi

Recording, live-streaming for online/hybrid classes (Kaltura)

Accessibility support

Scantron scoring, proctored exams

Tech for students – VDI, SASS, ChemDraw

Classroom support on call and for pre-scheduled equipment setup

Crestron control system and touchscreen (instructions online and on side of cart)

Laptop HDMI & VGA connections
Wireless Presentation capabilities*
Camera Web Checkout*

Technology in the classroom

Full PC computer w/ touchscreen monitor

BluRay Player

Campus Cable TV Tuner

Sound system with wireless microphone

Instructional Design

DigitalX team

The Hub on call



SPARTANS WILL.

Library (Associate University Librarian, Shawn Nicholson), <https://lib.msu.edu/digitalinfo/>

Teaching & Learning (Interim Director Nate Evans)

<https://25live.collegenet.com/msu/> (your classroom), <https://tech.msu.edu/teaching/>

Research Support and iCER / High-Performance Compute

Director – Justin Booth

researchIT@msu.edu

409 Computer Center

www.tech.edu/research

Director – Dr. Brian O'Shea

<https://contact.icer.msu.edu/contact>

Biomedical & Physical Sciences

Building, Room 1440

General IT services help desk – (517) 432-6200, ithelp@msu.edu, <https://uss.itservicedesk.msu.edu>

cto@msu.edu



Information Technology
MICHIGAN STATE UNIVERSITY



SPARTANS WILL.

As a public, research-extensive, land-grant university funded in part by the state of Michigan, our mission is to advance knowledge and transform lives by:

- Providing outstanding undergraduate, graduate, and professional **education** to promising, qualified students in order to prepare them to contribute fully to society as globally engaged citizen leaders
- Conducting **research** of the highest caliber that seeks to answer questions and create solutions in order to expand human understanding and make a positive difference, both locally and globally
- Advancing **outreach**, engagement, and economic development activities that are innovative, research-driven, and lead to a better quality of life for individuals and communities, at home and around the world.



Teaching in Classrooms

Linda Barrows and Vi’Nessa Webster
MSU Information Technology, Client Services

Technology Classrooms



Resources

tech.msu.edu

spartan365.msu.edu

techstore.msu.edu

msu.zoom.us

print.msu.edu

roomscheduling.msu.edu

filedepot.msu.edu

mediaspace.msu.edu

d2l.msu.edu

msu.edu

rcpd.msu.edu

Demo Sessions – REAL Room, 3 WEST

- 1:00pm – 1:30pm
- 1:30pm – 2:00pm
- 2:00pm – 2:30pm
- 2:30pm – 3:00pm



Need Help?

MSU Information Technology

(517) 432-6200

MSU Libraries Orientation: Teaching Track



Jessica Sender

The Basics

- MSU Libraries are open 7 days a week, 24/5 during semester
- Branches
 - Internal: Maps, Special Collections, Turfgrass, Music, Art, Vincent Voice Library, Digital Scholarship Lab, Makerspace
 - Digital: Health Sciences,
 - Physical: Gast Business, Law (managed by Law School), Kellogg Biological Station (Hickory Corners, Michigan)

- Special Collections
 - Specialized collections-rare, unique, local
 - Includes Africana, Turfgrass (not necessarily special collections, but unique)
 - Includes comic books, zines, cookery, radicalism, veterinary medicine, popular culture
 - Available to all

Partnering with Librarians

- Librarians
 - Librarians for departments and colleges
 - <https://lib.msu.edu/contact/subjectlibrarian/>
 - Oversee specific collections, can work with you to obtain resources specific to your research needs
 - Partners in research and education- curriculum development, collections, research, data management, user experience, etc.

Finding Resources

- Library Catalog
 - Searching for books, journals, media
 - www.catalog.lib.msu.edu
- Databases
 - From main home page, Electronic Resources will show you commonly used, as well as ability to search for databases by title
 - Can also search by subject, title, etc.
- Journals
 - From main home page, select Electronic Resources, Electronic Journals on the left, search by title
 - Can also search within catalog-will display both print and electronic

Resources

- Checking Out
 - 180 days (six months) unless recalled
 - Renew five times online before need to bring physical item in
- Delivery
 - Deliver books to your office on campus
 - Retrieve items from Remote Storage (bound journal volumes)
 - Scan and send items from physical resources (scans of journals articles, book chapters, etc.)
- Interlibrary Loan
 - Request items from other libraries-Big Ten, US, worldwide

Integrating Library Resources into Courses

- D2L
 - Provide access to library resources-books, ebooks, research help
 - Include stable links to readings and ebooks (consult with subject librarian if you have questions)
- Reserve Materials
 - Put items from our catalog on reserve for a semester (or longer):
<https://lib.msu.edu/contact/request-reserve/>
- Course Materials Program
 - Create physical course packs of resources from library and non-library resources
 - Electronic and print course packs

Integrating Resources into Courses

- Streaming Media
 - Streaming music from Naxos, Alexander Street Press, Medici.tv
 - Streaming videos from Swank, Kanopy, Film Platform, Alexander Street Press, as well as individual titles purchased
 - Includes PBS and other documentaries
 - Search the catalog by title or ask a librarian

Teaching and Learning Unit

- Teach information literacy sessions to students
 - Introduction to finding, evaluating and using research and resources
 - Exposure to conducting university-level research and writing
 - Focus on research basics
- Faculty can request a session
 - Work with librarian to meet learning goals and develop effective instruction session

Discipline-Specific Instruction

- Subject Librarians can teach instruction sessions focused on a variety of topics
 - Searching within discipline-specific databases
 - Discipline-specific research methods
 - Focus on special collections research
- Talk with your subject librarian to schedule a session and discuss curricular and learning goals and objectives

Other Teaching Collaborations

- Digital Scholarship Lab
- Makerspace
- Special Collections
- Writing Center
- Tutoring

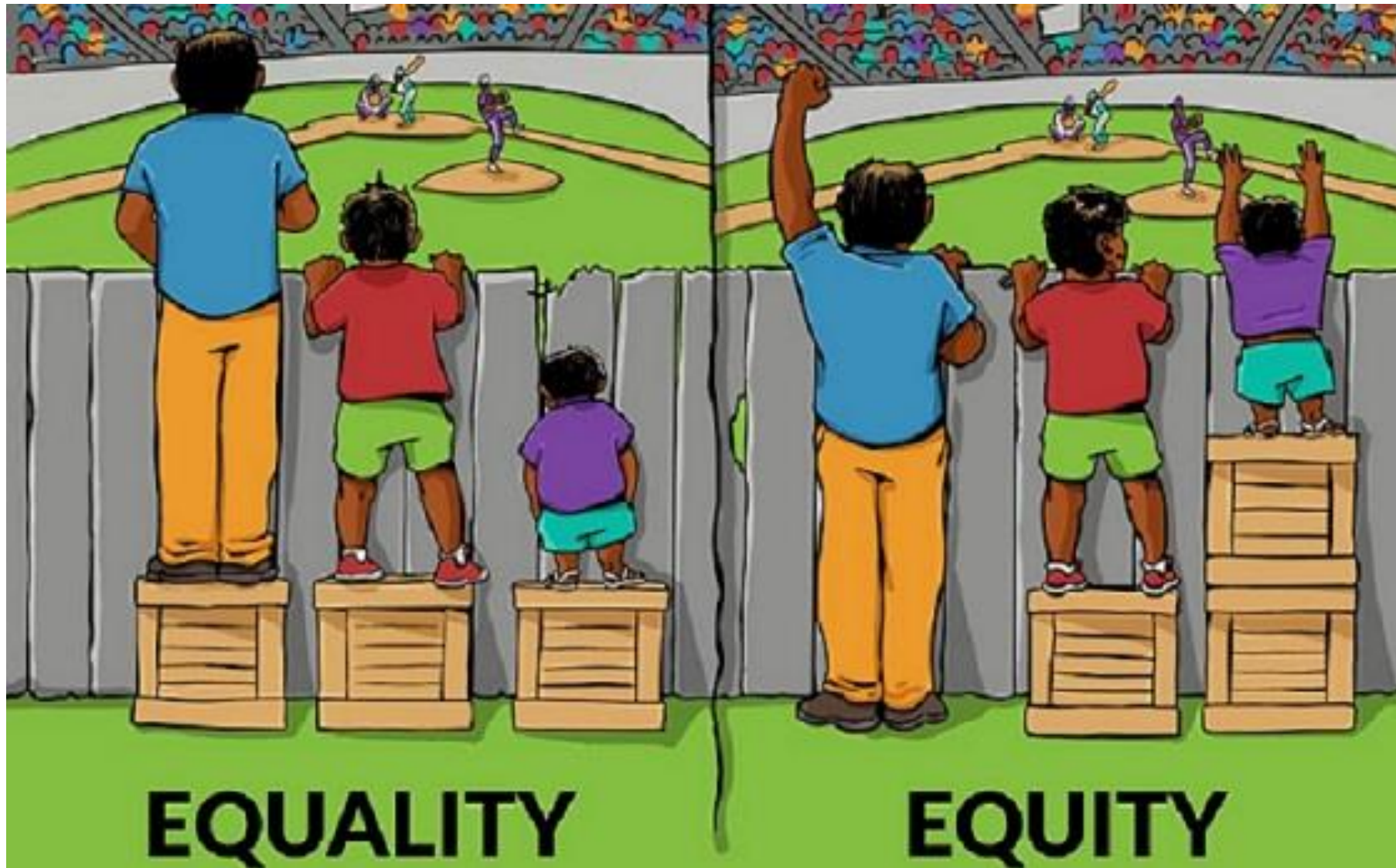
Questions?

Connect with us!

- Twitter (@msulibraries)
- Instagram (msulibraries)
- Facebook (MSU Libraries)

DigitalX

Digital Experience Team



Team Purpose

DigitalX exists to help students, faculty, and staff create great digital experiences that are accessible for everyone.

Team Stats

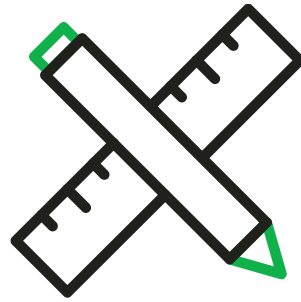
- Our team is about 4 years old
- It started with 1, and grown to 12 FTEs
- Made up of accessibility specialists, instructional designers, solutions engineers, and media producers.
- This summer we will have 9 students working in our office to support our work.

Services to Campus



Review before you
buy Procurement

"I want to buy____"



Creative
Design/Production

"I want to build____"



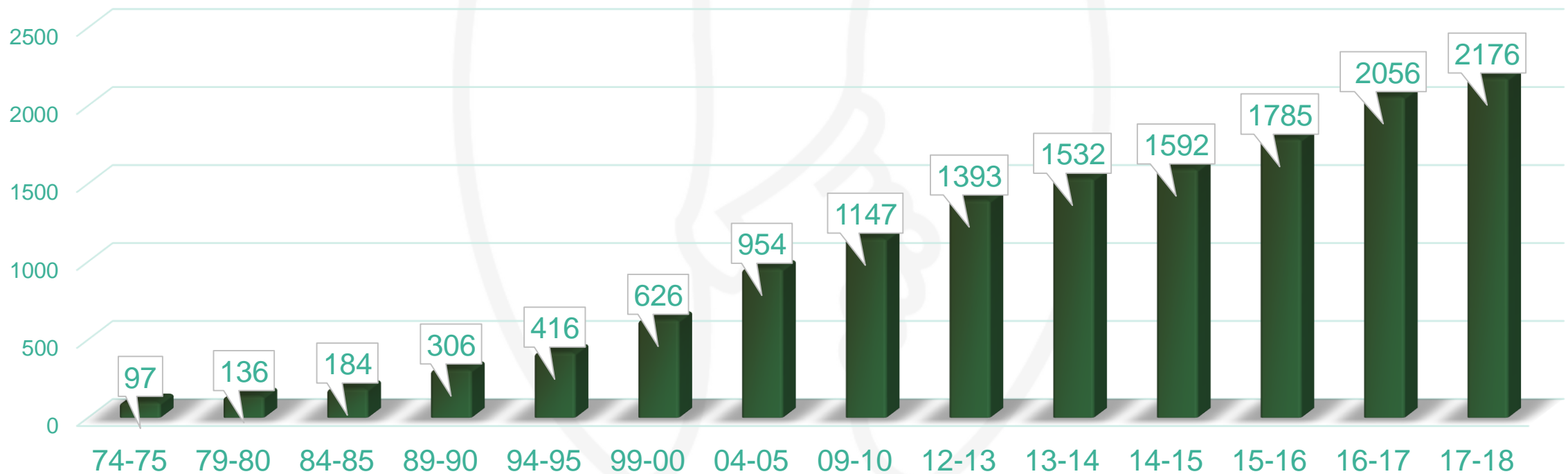
Accessibility Review:
Digital "things"

"I want to make sure this ____ is
accessible..."

Philosophy of Work

- It is important for us to add value to the student experience and to faculty work through partnership.
- Student-centered design and solutions help improve the student experience.
- Progress, not perfection.
- Accessibility is everyone's responsibility

MSU Disability Population Over Time



How to Help

Ask: “Is it accessible for everyone?”

Students, Faculty, Staff and the Community

How to Help

Access issues?

Let us know and we can help.

How to Help

Follow the Quick Tips when creating digital experiences.

You can help students, faculty, and staff create great digital experiences that are accessible for everyone.



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 - Streaming videos from Swank, Kanopy, Film Platform, Alexander Street Press, as well as individual titles purchased
 - Includes PBS and other documentaries
 - Search the catalog by title or ask your subject librarian
- Main Search on home page searches everything (discovery tool)
 - Divides results among content
 - If you're looking for something specific, go directly to catalog, database, journal

Resources

- Checking Out
 - 180 days (six months) unless recalled
 - Renew online five times before need to bring physical item in
- Delivery
 - Deliver books to your office on campus
 - Retrieve items from Remote Storage (bound journal volumes)
 - Scan and send items from physical resources (scans of journals articles, book chapters, etc.)
- Interlibrary Loan
 - Request items from other libraries-Big Ten, US, worldwide

Resources

- Items under consideration, in process, or being processed
 - Can request rush on these items- go to main home page → contact → request forms
- Faculty Authorization
 - Delegate borrowing privileges to research assistants

Services and Seminars

- Research Data Management
 - Consult on grant proposals, organizing, storing/preserving data, documenting and sharing data
- Scholarly Communications
- Copyright
 - Can consult with faculty and answer questions about copyright issues
- Citation Management
 - Workshops for EndNote, Mendeley, Zotero
- Digital Scholarship Lab and Makerspace
 - Variety of workshops, drop in hours, open lab, consultations

Getting Help

- Subject Librarians
 - Can assist with questions about resources (books, ebooks, journals, ejournals, streaming media)
- Ask a Librarian
 - Chat service, provides extensive coverage
- Discovery Services
 - Any issues with accessing library resources (databases, ebooks, etc.) call 517-353-8700
- IT Services
 - Any issues with D2L, Zoom, MediaSpace (MSU's media hosting platform), and other learning systems, call 517-432-6200 option 2

Questions?

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- Twitter (@msulibraries)
- Instagram (msulibraries)
- Facebook (MSU Libraries)

Data Management for Research

Dave Dai, College of Education

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Scout Calvert, MSU Libraries

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Data Storage Option Examples

- Data Center
- OneDrive (Spartan Drive)
- HPCC
- College file storage
- MSU FileShare
- Virtual Server Hosting
- Google G Suite
- GitLab
- AWS/Azure
- Website Hosting
- MSU MediaSpace
- REDCap
- File Depot

	Desktop, laptop	Spartan Drive OneDrive	MSU Google Docs	File server (\\fileshare.msu.edu)
Personal files ¹	✓	✓	✓	Ⓢ
Teaching and learning data ²	✓	✓	Ⓢ	✓
Non-confidential research data (de-identified information) ³	✓	✓	✓	✓
Confidential research data (identifiable information) ⁴	Consult ⁷	Consult ⁷	Ⓢ	Consult ⁷
Archive / backup ⁵	Ⓢ	✓	Ⓢ	Ⓢ
MSU Business files ⁶	Ⓢ	✓	Ⓢ	✓



What is Research Data?

“Research data is defined as the recorded factual material commonly accepted in the scientific community as necessary to validate research findings, but not any of the following: preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues. This 'recorded' material excludes physical objects (e.g., laboratory samples).”

What's your data?

Research Data Management

RDM is the process of taking care of *data* as recorded factual material, not just stuff on a hard drive, so that:

- Data are protected from human and technical failure
- Data can be understood, reanalyzed, and validated
- Data can be shared, deposited, and reused, without friction.
- Writing a Data Management Plan can be painless.

Data Management Plan

Since the 2013 OSTP Memo, “Increasing Access to the Results of Federally Funded Scientific Research,” a plan for caring for and disseminating data is a typical component of a grant application.

Your DMP should demonstrate not just that you can keep data safe from losses, keep confidential data secure, or share data on request, but that you are equipped to proactively prepare your data for archiving and sharing (via depositing) at the end of the grant.

RDM Support at the Library

RDM Resources:

<https://lib.msu.edu/rdmg/>

DMPtool

<https://dmptool.org/>

Consultations:

- Data management plans
- Individual, team, lab training
- Data deposit and archiving

calvert4@msu.edu or researchdata@lib.msu.edu

RDM Workshops

Crash Course in Research Data Management

Thursday, September 12, 3:00–4:30 PM • Digital Scholarship Lab

Prepare Your Data For Upload to a General Repository

Thursday, October 10, 3:00–4:30 PM • Digital Scholarship Lab

Writing Your Data Management Plan

Thursday, November 14, 3:00–4:30 PM • Digital Scholarship Lab

Thanks for your attention
and welcome to MSU!

Dave Dai, College of Education
daix@msu.edu

Scout Calvert, MSU Libraries
calvert4@msu.edu



The Institute for Cyber-Enabled Research

Brian O'Shea

Professor, CMSE, Physics & Astronomy, NSCL

Director, ICER



Mission

ICER is MSU's central research computing facility. The unit provides **high performance computing platforms**, outstanding **user support**, and **consultation** with staff experienced in scientific computing.



High performance computing

- 1.75 petaflop supercomputer – 23K+ cores
- 500+ NVidia GPUs
- Experimental hardware: FPGAs, Intel Phi
- Compute nodes with large numbers of CPU cores, large memory (multi-TB)
- 7 PB of high-speed storage space
- Hundreds of software packages
- **Hardware buy-in program**



User/PI support

- Training for new users – how to use HPCC
- More advanced training in R, Python, Matlab, bioinformatics programs, etc.
- Letters of support for grants
- Template facilities statements, data management plans, budget justifications
- REU supplement templates (ACRES REU)
- Publicity for computational work done with ICER resources!



Consultation

ICER's Research Consultants (RCs) facilitate:

- One-on-one training with your group members
- Identifying research needs
- Optimizing computational workflows
- Installing specialized software
- Help transitioning to larger-scale resources if necessary (e.g., NSF XSEDE)



When might you need ICER?

Our goal is to support work you can't do on your own computer in a reasonable time frame:

- Dataset sizes too large to analyze (or analysis is too slow)
- You need to run many permutations of a model/simulation/analysis for statistical or replication purposes
- You need to do large-scale or parallel computation, or need specialized hardware (GPGPUs)



Please contact us if:

- You need more computational horsepower than is available on your own computer!
- You suspect that more computing resources might be able to help your research, even if you're not quite sure how.
- You want to purchase HPC hardware for your group's use

Contact us via **contact.icer.msu.edu**, or directly email me:
oshea@msu.edu.



Get in Contact, Stay in Contact

contact.icer.msu.edu



twitter: @icermsu



facebook.com/msuicer



youtube.com/icermsu



instagram.com/icermsu



MSU IT Research Technology Support

Research Technology

Advanced Academic and Research Technology (AART)

- Partnering with researchers to improve outcomes

RESEARCH TECHNOLOGY



Research Technology

- How do researchers find technology support on campus?
- ResearchIT@MSU.edu

Goals

- Increase Researchers Success
- Develop a Collaborative Culture
- Structure Services to fit the Research Lifecycle



ResearchIT

Research Technology - Service Overview

- **Datacenter** hosting (colocation), physical and virtual machine compute in the MSU datacenter, plus basic cloud services for AWS, Azure
- **Storage** for research groups and data collection including fileshare.msu.edu, OneDrive and Teams
- **Network** connections through Eduroam, Merit/MiLR (URC), Internet2, ESNet, Globus, AGLT2, OSiRIS, OARNet (Ohio) & others
- **Collaboration** tools for researchers including Teams, OneNote, Qualtrics, Google G Suite, Zoom
- **Software** procurement, common software downloads including Mathematica, application delivery via virtual desktops or System Center

Research Technology

What we do:

- **Consult** - consultations on resources and services.
- **Connect** – helping to build a community of IT support.
- **Communicate** - we try to understand researchers' needs and communicate to service providers. A platform to share IT use cases and best practices.

Contact:

- **Email:**
ResearchIT@msu.edu
- **Web:**
<https://tech.msu.edu/research>
- **Microsoft Teams:**
Friends of Research
(Code to join: ltkm3jy)

Research Technology

How can we help?

What are your most pressing technology needs for conducting research?

What are your most pressing technology needs for teaching?



Visit each table and receive a signature. Once you collect all 9, fill out this card to be entered in to the drawing.

Turn in at Registration

Name and email:



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