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... 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
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)

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

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

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

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

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

Classroom support on call and for pre-scheduled equipment setup
Library (Associate University Librarian, Shawn Nicholson), [https://lib.msu.edu/digitalinfo/](https://lib.msu.edu/digitalinfo/)

Teaching & Learning (Interim Director Nate Evans)
[https://25live.collegenet.com/msu/](https://25live.collegenet.com/msu/) (your classroom), [https://tech.msu.edu/teaching/](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](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](https://uss.itservicedesk.msu.edu)

cuto@msu.edu
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/](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
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

- 1974-75: 97
- 1979-80: 136
- 1984-85: 184
- 1989-90: 306
- 1994-95: 416
- 1999-00: 626
- 2004-05: 954
- 2009-10: 1147
- 2012-13: 1393
- 2013-14: 1532
- 2014-15: 1592
- 2015-16: 1785
- 2016-17: 2056
- 2017-18: 2176
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.
MSU Libraries Orientation: Research 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)

• Librarians
  • Librarians for departments and colleges-can vary, so check: https://lib.msu.edu/contact/subjectlibrarian/
A little bit more…

• Special Collections
  • Specialized collections-rare, unique, local
    • Includes Africana, Turfgrass
    • Includes comic books, zines, cookery, radicalism, veterinary medicine, popular culture
  • Available to all

• Librarians
  • Oversee specific collections, can work with you to obtain resources specific to your research needs
  • Partners in research- 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
Finding Resources

• 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 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?

Connect with us!
• Twitter (@msulibraries)
• Instagram (msulibraries)
• Facebook (MSU Libraries)
Data Management for Research

Dave Dai, College of Education
daix@msu.edu
Scout Calvert, MSU Libraries
calvert4@msu.edu
### 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**

#### Comparison Table

<table>
<thead>
<tr>
<th></th>
<th>Desktop, laptop</th>
<th>Spartan Drive OneDrive</th>
<th>MSU Google Docs</th>
<th>File server (fileshare.msu.edu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal files ¹</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>☯</td>
</tr>
<tr>
<td>Teaching and learning data ²</td>
<td>✓</td>
<td>✓</td>
<td>☯</td>
<td>✓</td>
</tr>
<tr>
<td>Non-confidential research data (de-identified information) ³</td>
<td>✓</td>
<td>✓</td>
<td>☯</td>
<td>✓</td>
</tr>
<tr>
<td>Confidential research data (identifiable information) ⁴</td>
<td>Consult ⁷</td>
<td>Consult ⁷</td>
<td>☯</td>
<td>Consult ⁷</td>
</tr>
<tr>
<td>Archive / backup ⁵</td>
<td>☯</td>
<td>✓</td>
<td>☯</td>
<td>☯</td>
</tr>
<tr>
<td>MSU Business files ⁶</td>
<td>☯</td>
<td>✓</td>
<td>☯</td>
<td>✓</td>
</tr>
</tbody>
</table>
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?
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
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!
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)
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

<table>
<thead>
<tr>
<th>RESEARCH TECHNOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Award</strong></td>
</tr>
<tr>
<td>Faculty recruitment</td>
</tr>
<tr>
<td>Proposal</td>
</tr>
<tr>
<td><strong>Active research</strong></td>
</tr>
<tr>
<td>Lab setup &amp; source materials</td>
</tr>
<tr>
<td>Data collection &amp; experiment</td>
</tr>
<tr>
<td>Analysis</td>
</tr>
<tr>
<td>Graduate &amp; Undergrad research</td>
</tr>
<tr>
<td>Compliance &amp; safety</td>
</tr>
<tr>
<td>Grant administration</td>
</tr>
<tr>
<td><strong>Post-grant</strong></td>
</tr>
<tr>
<td>Publish &amp; share</td>
</tr>
<tr>
<td>Archival</td>
</tr>
</tbody>
</table>
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
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?
Thanks again and welcome to MSU!

Noon: Lunch here in the Green Room
1:00 - 3pm: Second Floor, Digital Scholarship Lab
Resource Fair and Demo Rooms

*Don’t forget your passport