Coalition for Networked Information
Spring 2017 Membership Meeting

April 3-4, 2017
Albuquerque, NM

#cni17s

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SUNDAY, APRIL 2

3:00 p.m.	**Executive Roundtable I** (*Enchantment C-D*) prior registration only

MONDAY, APRIL 3

8:30 a.m.	**Executive Roundtable II** (*Fiesta I-II & Foyer*) prior registration only
11:00 a.m.	**Registration Opens** (*Pavilion Landing*)
11:30 a.m.	**Orientation for First-Time Attendees** (*Enchantment C-D*)
12:15 p.m.	**Break** (*Pavilion Court*)
1:15 p.m.	OPENING PLENARY SESSION (*Pavilion I-III, Foyer*) ***What Today's Students Have Taught Us*** **Alison J. Head, Project Information Literacy**
2:30 p.m.	**Break** (*Pavilion Court*)

MONDAY, APRIL 3

2:45 p.m.   PROJECT BRIEFINGS

Ithaka S+R US Library Survey 2016	*Pavilion I-III*
A Linked Data Approach for Humanities Data	*Enchantment A-B*
Bots, Conversational UI, & Virtual Assistants	*Enchantment C-D*
Improving Authentication/Authorization	*Enchantment E*
DSpace 7	*Enchantment F*
How Libraries Learn	*Fiesta I-II*
Research Info Mgt within US Libraries	*Fiesta III-IV*
Developments of 45th President & Congress	*Sendero*

3:45 p.m.   **Break** (*Pavilion Court*)

4:15 p.m.   PROJECT BRIEFINGS

Building Data Refuge	*Pavilion I-III*
Rescuing Orphans of Scholarly Communication	*Enchantment A-B*
Learning Data Principles	*Enchantment C-D*
Scholarly Design at UConn Library	*Enchantment E*
How/Why Schools Embed IR in Campus Culture	*Enchantment F*
Institutional Analytics Dashboards with SHARE	*Fiesta I-II*
Usage/Impact/Pitfalls, Research Data Analytics	*Fiesta III-IV*
Libraries as Open Global Platform, MIT Report	*Sendero*

5:15 p.m.   **Break** (*Pavilion Court*)

5:30 p.m.   PROJECT BRIEFINGS

Data Integrity for Librarians/Archivists/Criminals	*Pavilion I-III*
Preservation Challenges of VR for Scholarship	*Enchantment A-B*
Online Scientific Reference Sample Collections	*Enchantment C-D*
Image Viewing & Manipulation with Mirador	*Enchantment E*
Biblometrics & Research at Univ. Waterloo	*Enchantment F*
Partnership: Affordable Learning Exchange	*Fiesta I-II*
"But We Don't Do Research Like That Anymore"	*Fiesta III-IV*
10(+) Years of Deep Blue at the Univ. Michigan	*Sendero*

6:00 p.m.   **Reception** (*Pavilion IV-VI*)

TUESDAY, April 4

7:30 a.m.   **Breakfast** (*Pavilion IV-VI*)

8:45 a.m.   PROJECT BRIEFINGS

Rethinking Repositories	*Pavilion I-III*
Advancing Accessibility through Libraries	*Enchantment A-B*
Open Persistent Identifier Infrastructures	*Enchantment C-D*
Update on FOLIO, OLE, & Open Lib. Foundation	*Enchantment E*
When Data Analytics & Big Data Move to the Lib.	*Enchantment F*
Preserving Digital Content at Scale	*Fiesta I-II*
Capacity Building for Digital Scholarship Services	*Fiesta III-IV*

9:45 a.m.   **Break** (*Pavilion Court*)

10:00 a.m.   PROJECT BRIEFINGS

CAVEkiosk in Library: At-Risk Cultural Heritage	*Pavilion I-III*
Digitizing Paleontological Collections, Wyoming	*Enchantment A-B*
Training Students for Digital Scholarship Support	*Enchantment C-D*
Open Collections: Holistic Discovery/Delivery	*Enchantment E*
Data Mgt. Support in Bioengineering/Biomedical	*Enchantment F*
UCLA's International Digital Ephemera Project	*Fiesta I-II*
Digital Preservation: DPN/DuraCloud Vault Yr. 1	*Fiesta III-IV*
New Incentive Infrastructure for Sharing Data	*Sendero*

10:30 a.m.   **Break** (*Pavilion Court*)

11:00 a.m.   PROJECT BRIEFINGS

Role of Academic Library in Fake News Era	*Pavilion I-III*
Software Carpentry in the Library	*Enchantment A-B*
IR Strategies: Executive Roundtable Report	*Enchantment C-D*
Developing Library Technology Infrastructure	*Enchantment E*
Perma.cc: Digital Scholarly Record Integrity	*Enchantment F*
Supporting Humanities Research at Scale	*Fiesta I-II*
Successful Open Educational Resources	*Fiesta III-IV*
Semantic Web Identity	*Sendero*

TUESDAY, April 4

12:00 p.m.   **Lunch** (*Pavilion IV-VI*)

1:00 p.m.   PROJECT BRIEFINGS

Protect Researcher Privacy in Surveillance Era	*Enchantment A-B*
Technical Approaches to Email Archives	*Enchantment C-D*
Bldg Upon IR's to Solve Scholarly Pub. Problems	*Enchantment E*
Social Networks & Archival Context	*Enchantment F*
Evolution of Lib. High Tech. Collaborative Spaces	*Fiesta I-II*
Community-owned Repository Software	*Fiesta III-IV*

2:00 p.m.   **Break** (*Pavilion Court*)

2:15 p.m.   CLOSING PLENARY SESSION (*Pavilion I-III, Foyer*)
Fresh Perspectives on the Future of University-Based Publishing
Amy Brand, The MIT Press

3:30 p.m.   Meeting Adjourns

What Today's Students Have Taught Us

Alison J. Head
Project Information Literacy

Project Information Literacy (PIL) is a series of national research studies that investigates what it is like to be a student in the digital age. Since 2008, we have surveyed and interviewed more than 13,000 college students and recent graduates from over 60 U.S. higher education institutions, making PIL the largest study of information literacy ever conducted. We seek to understand how students find information and conduct research—in their words and through their experiences—for coursework and solving information problems in their everyday lives. In this plenary talk, PIL's information-seeking model is introduced and key research takeaways are presented from PIL's different studies. Also included are examples from PIL's work about how academic librarians throughout the country are developing ways for strengthening and supporting undergraduate research and ultimately, for helping students to succeed at learning.

http://projectinfolit.org/

About the Speaker
Alison J. Head is an information scientist and social science researcher. She is the founder and director of Project Information Literacy (PIL), an ongoing, research study that asks: What it is like to be a student in the digital age? In a series of nine groundbreaking research studies, PIL has investigated how college students and recent graduates utilize research skills, competencies, and strategies for completing course work and for solving information problems in everyday life. Since 2008, Alison and her team of PIL researchers have interviewed and surveyed over 13,000 undergraduates at more than 60 U.S. four-year public and private universities and colleges and two-year community colleges. In a 2016, *Inside Higher Education* column, Barbara Fister called PIL "hands-down the most important long-term, multi-institutional research project ever launched on how students use information for school and beyond." Alison has a Ph.D. in library and information science from the University of California at Berkeley where she also received her BA. Currently, she is a Research Fellow at the metaLAB at Harvard University and a Visiting Scholar in University Libraries at the University of Nebraska. From 2011 through 2015, Alison was a Fellow and Faculty Associate at the Berkman Klein Center for Internet & Society at Harvard University.

Fresh Perspectives on the Future of University-Based Publishing

Amy Brand
The MIT Press

Academic libraries are taking on more active roles in support of research dissemination. Does a diminished role for university presses necessarily follow? It does not. Brand will discuss the distinctive and increasingly urgent functions of the university press, and the challenge of balancing the imperatives of sustainability and openness. How do we meet the differing requirements of professional, text, and trade authors? How do we fulfill our mission to make our publications available, discoverable, and searchable in digital form now, and in perpetuity? She will also cover strategies to promote productive partnerships, and the significant benefits of closer coordination among presses, libraries, and the academic departments within their institutions.

About the Speaker

Amy Brand was named Director of the MIT Press in July 2015. Previously, she served as Vice President Academic and Research Relations and Vice President North America at Digital Science. From 2008 to 2013, Brand worked at Harvard University, first as Program Manager of the Office for Scholarly Communication and then as Assistant Provost for Faculty Appointments and Information. Before moving to Harvard, she held long-term positions as an Executive Editor at the MIT Press and as Director of Business and Product Development at CrossRef. Brand serves on the National Academy of Sciences Board on Research Data and Information, the Duraspace Board of Directors, was a founding member of the ORCID Board, and regularly advises on key community initiatives in digital scholarship. She holds a B.A. in linguistics from Barnard College and a PhD in cognitive science from MIT.

Ithaka S+R US Library Survey 2016

Roger C. Schonfeld
Director, Library and Scholarly Communications
Ithaka S+R

How are library leaders making investments in the future of their organizations? What kinds of strategies are they pursuing in support of research, teaching, and learning? And what constraints do they recognize as limiting their ability to pursue these strategies? In fall 2016, Ithaka S+R surveyed academic library deans and directors across the US on these key topics and several others. With a response rate of 49%, the project offers a wide array of perspectives on the opportunities and challenges currently facing academic libraries and higher education more broadly.

Our analysis by Carnegie Classification and by years in office shows some of the different needs and perspectives that directors manifest at different institution types and at different stages in their tenure. Comparisons with previous cycles of the Ithaka S+R Library Survey demonstrate the evolving strategies that libraries are implementing in response to the changing landscape of higher education. Comparisons with the Ithaka S+R US Faculty Survey 2015 point to a number of differences between faculty members and library directors on key issues. The full report of findings, co-authored by Christine Wolff and Roger Schonfeld, will be made publicly available in April 2017 in conjunction with the CNI meeting. This session will be designed to generate a rich discussion on the implications of the survey findings and potential follow-on projects.

A Linked Data Approach for Humanities Data

Sayeed Choudhury
Associate Dean for Research Data
   Management
Johns Hopkins University

Jaap Geraerts
Research Associate, Centre
   for Editing Lives and
   Letters
University College London

The Archaeology of Reading (AOR) aims to enable innovative and systematic research of historical reading practices through the creation of a digital research environment that contains two select corpora of books annotated by Gabriel Harvey and John Dee. Through the annotation and physical manipulation of their books, both readers created a web of relationships between annotations and between (constituent parts of) these books. In addition to these compelling humanities dimensions, AOR informs the development of an extensible data infrastructure that supports a range of data and services. At the 2016 Coalition for Networked Information (CNI) spring membership meeting, the AOR team discussed the novel methods by which scholars, librarians and technologists have worked as equal partners to develop this infrastructure. At the 2016 CNI fall membership meeting, the AOR team demonstrated the use of common infrastructure to support multiple data models related to digitized content from manuscripts and early printed books. For this presentation, the AOR team will explain the use of linked data models and protocols to connect the various data and to study the scholars' and annotators' pathways through both physical and digital content. Our approach supports the breadth of diverse humanities data without sacrificing the inherent richness from the underlying different data models. This systematic progression of supporting increasingly complex scholarly use cases and of extending the technological capabilities represents an important exemplar for levering extensible, common infrastructure across a diverse range of humanities data.

http://bookwheel.org
http://romandelarose.org

Is the Researcher Human? Is the Librarian?
Bots, Conversational User Interfaces, and Virtual Research Assistants

Lisa Janicke Hinchliffe
Professor
University of Illinois at
    Urbana-Champaign

Jason Griffey
Affiliate Fellow, Berkman
    Klein Center for Internet
     & Society
Harvard University

Emily King
Digital Services Librarian
College of Southern Nevada

Michael Schofield
Front End Lead, Partner
LibUX

Information seeking, retrieval, analysis, and resultant decision-making are often discussed as human activities; however, increasingly humans rely on automation, technology surrogates, and artificial intelligence for these activities. Bots and conversational user interfaces are beginning to emerge as service surrogates in libraries. Legal and sales professions are increasingly relying on virtual research assistants and technology assisted review and decision-making. As these trends grow and additional capacities emerge through machine learning and artificial intelligence, libraries and information providers will face emerging questions that will change practices while potentially expanding opportunities for services and contributing value to research, learning, and other information-intensive activities.

This issue-oriented session will explore implications of these emerging technologies and their applications for libraries and information providers. Questions include: In what circumstances can bot deployment enhance services to users? How should we design content and interfaces when the "reader" of the content might not be a human, but rather a computer or bot that is processing that information on behalf of a person? How will information literacy programs help users develop fluency with conversational (and often voice-based) search and retrieval? What are the ethical and legal implications of deploying these technologies? How do we ensure accessibility for people with disabilities to these tools?

After an initial discussion among the panelists, attendees will be encouraged to share their perspectives and raise additional questions in this issue-oriented session.

Resource Access for the 21st Century, RA21 Update:
Pilots Advance to Improve Authentication and Authorization for Content

Chris Shillum
Vice President Product Management,
     Platform and Data Integration
Elsevier

Ann Gabriel
Vice President, Academic &
     Research Relations
Elsevier

Building on the report by the Coalition for Networked Information (CNI) on the Authentication and Authorization Survey conducted in 2016, the STM Association and NISO have been convening conversations focused on how to improve the user experience and provide a more seamless access experience to patrons, while also providing greater control and analytics over network activity. Community conversations commencing with the CNI fall 2016 meeting shared potential alternatives to IP-authentication and sought to build momentum toward testing alternatives among publisher, system vendors, and library partners. This session will include information on several emerging pilots that will explore different approaches to key aspects, such as improving the "Where Are You From (WAYF)" user experience or defining user attributes to support more granular usage reporting while still preserving user privacy. Participants in these pilots include publishers, technology providers, corporate subscribers (e.g. pharmaceutical companies) and academic institutions. The presentation will be followed by an interactive audience discussion of the opportunity, institutional readiness, and potential next steps.

http://www.stm-assoc.org/standards-technology/ra21-resource-access-21st-century/

DSpace 7: Selecting and Building a New DSpace User Interface

Michele Mennielli
International Business Developer
4Science

Maureen Walsh
Interim Head, Publishing and
    Repository Services,
    Libraries
The Ohio State University

Debra Hanken Kurtz
CEO, DuraSpace
DuraSpace

In 2015, the DSpace Steering Group announced an initiative to prototype and select the technology to use for a new, modern user interface (UI), targeted for DSpace 7. Later that same year, a DSpace UI Prototype Challenge was announced, encouraging institutions and community members to rapidly build small UI prototypes on various technology platforms. In early 2016, the community prototypes were closely analyzed, and a developer team was tasked with building a proof-of-concept on the leading platform, Angular 2. At the 2016 Open Repositories conference, the proof-of-concept UI was presented along with an analysis of findings. We discovered that the Angular 2 proof-of-concept UI provided a more modern, dynamic user experience, while also meeting DSpace's requirements for search engine optimization (SEO) and accessibility. As of late 2016, we established a new DSpace 7 UI Working Group to begin building the new Angular UI for DSpace 7. This working group quickly established two subgroups: a team concentrating on Angular 2 UI development and a team concentrating on necessary REST API enhancements. This briefing will provide information about the project's goals, progress, and lessons learned.

DSpace UI Prototype Challenge:
https://wiki.duraspace.org/display/DSPACE/DSpace+UI+Prototype+Challenge
DSpace 7 UI Working Group:
https://wiki.duraspace.org/display/DSPACE/DSpace+7+UI+Working+Group
CALL for Participation in DSpace 7 Development:
http://duraspace.org/node/3075

How Libraries Learn:
Catalyzing Student Research with the Fondren Fellows Program

Lisa Spiro
Executive Director, Digital
    Scholarship Services, Fondren
    Library
Rice University

Marcel LaFlamme
Ph.D. Candidate, Department
    of Anthropology
Rice University

Christina Regelski
Ph.D. student, Department of History
Rice University

As universities strive to create opportunities for students to engage in meaningful research projects, the library can serve as not only the source of research materials, but also the subject of research. Through the Fondren Fellows program, created in 2016, Rice University undergraduates and graduate students work on projects related to a research question around improving and extending Fondren Library's programs and services. Fellows are mentored by a library staff member, present their results to relevant stakeholders inside and outside the library, and receive up to $3000 for one semester of work. This presentation will provide an overview of the Fondren Fellows program and present case studies of two Fellows' projects: Know Your (Author) Rights and Mapping Civil War Narratives. For the former project, an anthropology graduate student conducted interviews with faculty across Rice's seven tenure-granting Schools to better understand how they approach the issue of rights retention in connection with their published work. For the latter project, a history graduate student used Esri ArcGIS and Story Maps to visualize the library's Civil War-era archival collections. Both projects allowed these students to gain critical professional skills, while creating new points of access for library materials and laying the groundwork for expanded scholarly communication services. More broadly, the Fellows program has allowed Fondren Library to tap into new sources of expertise and energy as it promotes an organizational culture of research-based practice.

http://library.rice.edu/fondren-fellows
http://ricegis.maps.arcgis.com/apps/Cascade/index.html?appid=b3b82f0369994442b3a6fa86c0ff5a20

The Emergence of Research Information Management (RIM) within US Libraries

Rebecca Bryant
Senior Program Officer
OCLC Research

Paolo Mangiafico
Coordinator of Scholarly
    Communications Technology
Duke University

Maliaca Oxnam
Associate Librarian, Office of Digital
    Innovation & Stewardship
University of Arizona

Advancing technologies, standards, and networked information offer new opportunities for institutions to steward and disseminate the scholarly outputs of its researchers. In this project briefing we will discuss how research information management (RIM) is emerging as a part of scholarly communications practice in many US university libraries, in close collaboration with other campus stakeholders. RIM intersects many aspects of traditional library services in discovery, acquisition dissemination and analysis of scholarly activities, but does so at the convergence of institutional data systems, faculty/research processes, and institutional partners. It also can serve as the basis for a growing shift in emphasis in research libraries--from focusing primarily on providing local access to research produced elsewhere, toward a greater focus on providing global access to research produced by the institution's community. The integration of open access repositories with RIM programs provides an opportunity to strengthen participation with and impact of both. The University of Arizona, with leadership from the University Libraries, has converted a decentralized, antiquated paper-based faculty activity review (FAR) process into a cloud-based system, integrating faculty inputs and aggregating information from multiple data systems creating a complete authoritative record of faculty activities and outputs to support institutional analysis and expert discovery services. Duke University libraries support a faculty-initiated open access policy by simplifying processes for self-archiving and aggregating research outputs into public profiles to support both individual researchers' incentives and institutional needs. This presentation will also outline a growing program of research on emerging library support for RIM, led by OCLC Research in collaboration with OCLC Research Library Partnership member institutions.

http://uavitae.arizona.edu/ http://profiles.arizona.edu
https://scholars.duke.edu/ https://scholarworks.duke.edu/ http://hangingtogether.org/?p=5794

Direct from the Swamp:
Developments of the 45th President and 115th Congress

Krista L. Cox
Director of Public Policy Initiatives
Association of Research Libraries

Alan S. Inouye
Director of Public Policy
American Library Association

D.C. policy analysts provide a quick overview of policy and organizational developments in the Trump Administration and 115th Congress. Then they will transition to a deeper exploration of selected issues of particular interest to the community. The specific issues will depend on developments up to the time of the Coalition for Networked Information membership meeting, but may well include copyright, net neutrality, federal funding, data refuge/access to government information, immigration, and privacy. The conclusion will include ARL and ALA policy initiatives and plans, leading into the Q&A period.

Building Data Refuge:
From Bucket Brigade to Sustainable Action

Laurie Allen
Assistant Director for Digital
    Scholarship, Libraries
University of Pennsylvania

Kimberly Eke
Director for Teaching,
    Research & Learning
    Services, Libraries
University of Pennsylvania

Elizabeth Foster
Public Policy and Social Sciences
    Librarian
Georgetown University

Delphine Khanna
Head of Digital Library Initiatives
Temple University

Catherine Morse
Government Information, Law and
    Political Science Librarian
University of Michigan

Beginning late in 2016, a large collaborative group of volunteers began to work together to back up vulnerable climate and environmental data at events around the country. In this panel, key organizers of this endeavor will discuss the Data Rescue events, the workflow that was developed to support these distributed activities, and some of the challenges encountered. They will also describe the emerging collaborative effort to move towards a more sustainable model, bringing together public participation, research libraries, and the open data community. To be successful, such a model will need to draw on the long-standing commitment from the library community to support digital preservation and access to federal data, as well as on more recent partnerships that we are forming with members of the open data movement in response to the urgency of the current situation and the myriad challenges of preserving access to these complex sources.

http://www.ppehlab.org/
http://librariesnetwork.org

To the Rescue of the Orphans of Scholarly Communication

Herbert Van de Sompel
Scientist
Los Alamos National Laboratory

Michael L. Nelson
Professor
Old Dominion University

Martin Klein
Scientist
Los Alamos National Laboratory

Over the past years, scholars have started using a wide variety of online portals to conduct aspects of their research and to convey research results. These portals exist outside of the established scholarly publishing system and can be dedicated to scholarly use, such as experiment.org, or general purpose, such as SlideShare. The combination of productivity features and global exposure offered by these portals attracts researchers and they happily deposit scholarly artifacts there. But history has shown that even popular web platforms can disappear without a trace. Also, they rarely provide any explicit archival guarantees; many times quite the opposite. Whereas initiatives such as LOCKSS and Portico have emerged to make sure that the output of the established scholarly publishing system gets archived, no comparable efforts exist for scholarly artifacts deposited in these online platforms. A recently started Andrew W. Mellon funded project, explores how these scholarly orphans could be archived. Because of the scale of the problem—the number of platforms and artifacts involved—the project starts from a web-centric archival paradigm inspired by web archiving. Because the artifacts are often times created by researchers affiliated with an institution, the project focuses on tools for institutions to identify and archive these artifacts. This project briefing will introduce the problem domain. It will provide an insight into the approach that is explored for discovering artifacts that were deposited in portals, capturing them, and ingesting them into an institutional archive. The wide range of research challenges involved in conducting these tasks will be detailed and early results will be shared.

From Theory to Practice:
Leading the Way with Learning Data Principles

Jenn Stringer
Associate CIO, Academic Engagement
University of California at Berkeley

Learning data is being generated at an exponential rate by students, faculty, and staff. This presents unprecedented opportunities to influence student academic success and learning behavior, assist support staff with the planning of individual or group academic interventions, inform pedagogies and curriculum offerings, and effectively address recruitment, retention, marketing, and institutional effectiveness. While there are challenges in harnessing, governing, and using learning data, along with clarifying why it is collected, colleges and universities have an opportunity to collaborate and provide their collective guidance on decisions that need to be made. This is why several members of IMS Global Learning Consortium came together to outline guiding principles for institutional leaders, administrators, and other stakeholders, who are participating in ongoing dialogues specific to the gathering and usage of data. As part of an evolving playbook of resources being developed by IMS Global institutional members, this draft is designed to help academic leaders, IT directors, and practitioners reflect upon, discuss, and shape institutional and global discussions around learning data. This resource document is open for public review and comment. Led by institutional representatives who were instrumental in the articulation of these principles, this session will be an open discussion and debate about the principles and the rationale behind them. We will also explore the collaborative process used to develop these principles to inspire others to get involved and contribute to these types of collaborative efforts and share examples of other efforts in this area.

https://www.imsglobal.org/learning-data-analytics-key-principles

From Transactions to Collaborations:
The Greenhouse Studios, Scholarly Design at UConn Library

Martha Bedard
Vice Provost University Library
University of Connecticut

Holly Phillips
Assistant Vice Provost
    University Library
University of Connecticut

Greg Colati
Assistant University Librarian,
    Archives, Special Collections, &
    Digital Curation
University of Connecticut

While collaborative multi-modal presentations of scholarly output have become more common, much of the routine operations of scholarship remain anchored in print-centric regimens. Scholars—particularly in the humanities—continue to work within the familiar hierarchical and single author print tradition. In this model librarians are essential to the process; however, they are involved in the pre-work and not the development of the final product. One of the aims of The Andrew W. Mellon Foundation funded Greenhouse Studios at the University of Connecticut (UConn) is to draw together faculty and librarian staff, along with other non-academic staff to flatten the vestiges of a print-only tradition. It will do so by implementing and honing a design-based, inquiry-driven, collaboration-first model of scholarly production based on continuous, close, equitable communication among equal partners. There are specific questions the library in particular is seeking answers to in this inquiry. For example, librarians may participate in creating these scholarly products because of skills and knowledge not related to their library degree. How can we set up library staff for success in this environment? Are our current librarians equipped, both in training and organizationally, for a non-transactional relationship with faculty and other staff? How do we evaluate their contribution and feeling of integration, authorship, etc.?

This project briefing will focus on the UConn Library's motivations, expectations, and early impressions of the roles, benefits, and administrative barriers and as we begin this three year collaboration with a diverse set of UConn partners.

The So-What Test:
How and Why Schools Are Embedding the IR into Campus Culture

Promita Chatterji
Product Team
bepress

Since the creation of institutional repositories in the early 2000s, users have debated both their role and their success, or lack thereof. How do the primary goals of a repository affect its sustainability and relevance on campus? Drawing from a diverse community of over 500 institutions, we find that schools with thriving institutional repository programs tend to be the ones that eschew disrupting the academic publishing model and instead prioritize existing institutional goals. Rather than persuade campus groups to come to them, these libraries proactively build their repository services around the campus's most pressing needs. In this project briefing, we discuss what it means to integrate the institutional repository into the core goals and activities of an institution. We present possible frameworks for assessing the level of campus-wide adoption, from technical measurements like linking, embedding, and uploading to nontechnical expressions of support, including funding. We share our findings about the types of repository content that universities value most. Finally, we will discuss how this research has inspired bepress's development direction toward more flexible and seamless embedding of researcher profiles, custom expertise directories, and readership and impact analytics. Attendees will come away with concrete ideas for how to engage various campus groups in ways that lead to sustainable, university-wide programs far beyond the scope of the traditional institutional repository.

Institutional Analytics Dashboards with SHARE:
The UC San Diego Experience

Declan Fleming
Chief Technology Strategist
University of California San Diego

Jeffrey Spies
Chief Technology Officer
Center for Open Science

Like many universities, the University of California San Diego (UCSD) Library wanted to build a research data catalog to provide discoverability and access to data sets created or hosted on campus, but not housed in the Library's own repository. They were going to (1) find and curate these datasets; (2) build a database to host the metadata about these datasets; (3) expose the database to the web via API; and (4) create a front-end dashboard atop said API. Enter SHARE. SHARE is creating a free, open data set of research activity across the research life cycle, data sets included, and a set of tools to access this data, including an API. With a dataset of over 17.8 million entries, a database, and a flexible API, the SHARE team has built several interfaces as simple, client-side front-ends. Thus, rather than having to complete the four steps previously mentioned, UCSD Library staff had only to do the first step and contribute metadata to the SHARE data set. UCSD's partner, the Center for Open Science, created a modular and themeable open source front-end to the API, database, and data already provided by SHARE. Other organizations can easily adapt this open source code to create their own dashboards. This presentation will include a demonstration of the dashboard, a description of the process, and discussion of challenges and tips for other institutions that want to do something similar.

https://share.osf.io/discover
https://osf.io/preprints/discover

Understanding Usage, Impact, and Pitfalls in Research Data Analytics

Jon Wheeler
Data Curation Librarian
University of New Mexico

Kenning Arlitsch
Dean of the Library
Montana State University

Stephen Abrams
Associate Director, UC Curation
     Center
California Digital Library

"Polluted Leftovers: Repository Metrics from the Perspective of a Most Downloaded Item" (Wheeler, Arlitsch)

Over- and under-reporting of item downloads within institutional repositories (IR) are known issues which largely derive from inconsistent measurement of bot activity. The challenges of identifying and filtering the activity of "bad" versus "good" bots can fall outside the interest and scope of duties for repository managers, while the abundance of metrics applications and configurations among common IR platforms can contribute to rather than alleviate existing complexities. In this project briefing, librarians from Montana State University and the University of New Mexico (UNM) present a mapping of DSpace Solr log to Google Analytics data together with the outcomes of the resulting analysis. By telling the discovery and access "stories" of the most downloaded items from UNM's IR, LoboVault, presenters will characterize human and bot behaviors which illustrate the reporting challenges facing repository managers and the contrasts between metrics services.

"Making Data Count: Promoting Open Data Through Usage and Impact Tracking" (Abrams)

Research data are fundamental to the success of the academic enterprise. However, the primary vehicle for scholarly credit and accountability remains the journal article, and the academic community still gauges the impact of scholarship primarily through article citation and usage statistics. How can we expand this to include research data? The challenge in doing so is that the complex, aggregative, and often dynamic nature and use of datasets is quite different from that of publications. Any solution will require the development of new modes for tracking impact through data-level metrics (DLM). The widespread availability of such measures would constitute an important incentive for promoting open data principles and

encouraging adoption of research data management best practices. Our project, Making Data Count (MDC), aims to do just that: to build the necessary social and technical infrastructure to support data as first class research outputs. The MDC team (including the California Digital Library, COUNTER, DataCite, and DataONE) are working together to publish a new COUNTER recommendation on data usage statistics; launch a DataCite-hosted MDC service for aggregated DLM based on the open-source Lagotto platform; and to build tools for data repository and discovery services to easily integrate with the new MDC service. This effort will provide a clear path for data outputs to be given better recognition and fuller integration into the scholarly ecosystem and workflows.

https://dlm.datacite.org/

Libraries as Open Global Platform:
An MIT Vision and Invitation

Chris Bourg
Director of Libraries
Massachusetts Institute of
    Technology

Armand Doucette
Associate Director
    Information Technology
    and Digital Development
Massachusetts Institute of Technology

Heather Yager
Director of Digital Development
Massachusetts Institute of
    Technology

The Massachusetts Institute of Technology (MIT) released an Institute-wide Task Force on the Future of Libraries Preliminary Report on October 24, 2016. The overarching theme of the report is that the MIT Libraries must become a global library for a global university. In our vision of the future, libraries operate as open, trusted, durable, interdisciplinary, interoperable content platforms that provide a foundation for the entire life cycle of information for collaborative global research and education.

The MIT Task Force envisions research libraries as a networked set of global platforms replete with content, data, metadata, images, audio files, laboratory notebooks, course materials, and more. We imagine a repository of knowledge and data that can be exploited and analyzed by humans, machines, and algorithms. Fully realizing this vision will require collaboration among libraries, archives, publishers and a variety of other players in the scholarly communications sector.

The goal of this presentation is to inspire productive discussions on how our communities might collaboratively contribute to building the tools, models, infrastructures and connections to drive progress towards this vision for the global academic library community.

pubpub.org/pub/future-of-libraries

Data Integrity for Librarians, Archivists, and Criminals: What We Can Steal from Bitcoin, BitTorrent, and Usenet

Jeffrey Spies
Chief Technology Officer
Center for Open Science

Data integrity is important in distributed systems. The same characteristics that make these systems robust (e.g., fault tolerance) make maintaining data integrity challenging. For this reason, hash functions play a central role in the algorithms and technologies that power Usenet, BitTorrent, and Bitcoin and its blockchain. A hash function is a function that maps arbitrarily sized data to some ideally smaller, unique, and non-invertable data of fixed size (the importance of these attributes will be explained). The MD5 hash of the title of this presentation is 23c1d6085d85ae07378da9861e792c34; if the Oxford commas were removed, the hash would change to 6eed93a3b7dc829f38065518b346ee72. If you were given both the title and its hash, then you could compute the hash of the title you received yourself and compare it to that of the hash you received. If they differed, you would know that there was an error in transmission or that an intermediate editor rejects clarity and civility. This presentation will introduce hashes and their variants, these distributed and sometimes dubious systems, and what can be learned and practically applied in today's digital repositories for purposes of auditing, identifying, recovering, and sharing data.

Virtual Reality in the Trenches:
Addressing the Preservation Challenges of Virtual Reality for Scholarship

Zack Lischer-Katz
CLIR Research Fellow in Data
     Curation
University of Oklahoma

Matt Cook
Emerging Technologies
     Coordinator
University of Oklahoma

This project briefing will present work being conducted at the University of Oklahoma (OU) to develop strategies and best practices for addressing the digital preservation and data curation needs associated with adopting the use of virtual reality (VR) and 3D digital assets in academic research and instruction. Since January 2016, OU Libraries has deployed eight networked VR workstations across campus, and since then, successful course integrations and research applications at OU—including architecture, structural biology, anthropology, and medical imaging—have demonstrated the capacity of VR to enhance spatial thinking, visual literacy and embodied information acquisition. Along with these new scholarly possibilities that VR offers, emerge new data management and digital preservation problems, including how to properly document and manage 3D research data throughout complex and iterative research practices, how to maintain chain of custody and document data precision, and how to sustain consistent access to VR technologies as they change over time. Addressing these concerns is critical to supporting reproducibility and integrity for research. This project briefing will draw from our real-world experiences of deploying VR in teaching and research to discuss these key issues related to the preservation of VR-related data, software and hardware. We will discuss current work focused on the development of infrastructure and best practices for archiving VR/3D research data on campus and beyond, exploring the following issues: sustainable 3D file formats; associated metadata (schemas and workflows); data repositories; and VR software and hardware preservation. The major takeaways from this presentation will include strategies for the development of "preservation-ready" academic VR platforms; identification of existing and future institutional collaborations; and preservation planning for 3D research outputs.

Online Scientific Reference Sample Collections and Shared Linked Data for Heritage Science and Related Disciplines

Fenella France
Chief, Preservation Research
Library of Congress

The continued challenges for data in any discipline are sustainable access, open source file formats, and the capacity for linked data. Collaborations with European and American colleagues indicates a shared concern, with the need for a more integrated approach to truly linked data, and high level metadata embedded within datasets. The Research Data Alliance (RDA) is bringing together a more cohesive approach to data management on the global scale. Developments for linked scientific data generated on heritage materials have advanced within the Library of Congress Preservation Research and Testing Division, who have engaged with colleagues in RDA and internationally to build upon existing standards and authorities, allowing greater credence for humanities and cultural heritage linked data. The Center for Linked Analytical Scientific Samples - Digital (CLASS-D) encompasses both a physical collection of reference samples and a database structure with the unique capability to link a range of types of scientific instrumental analyses back to original source materials, to track samples, and to improve web accessibility for heritage collections. Access and interoperability of data are critical elements for an open, federated database initiative. While there is lip service given to "open access," often the full requirements to achieve this are not fully understood until the completion of a project. Standardized digital protocols for storing and accessing scientific cultural heritage data are vital for interoperability between heritage institutions and the preservation of international culture in libraries, archives, galleries, and museums. Linking and authenticating data for publication as well as ensuring these infrastructures are more freely accessible are essential components for linked networked data.

Collaborators: Dr. Robert J. Hanisch, Director of the Office of Data and Informatics (ODI), National Institute of Standards and Technology (NIST); Dr. Kerstin Lehnert, Director, Interdisciplinary Earth Data Alliance, Lamont-Doherty Earth Observatory, Columbia University

https://rd-alliance.org http://www.geosamples.org/igsnabout
http://www.loc.gov/preservation/scientists/projects/class.html

Updates from the Field:
Image Viewing and Manipulation with Mirador

Elizabeth McAulay
Interim Head, Digital Library Program
University of California, Los Angeles

Todd Grappone
Associate University Librarian
   for Digital Initiatives and
   Information Technology
University of California, Los Angeles

Our project briefing will present an in-progress project to publish a fully online spectral image dataset of medieval manuscripts with two layers of textual materials, i.e., palimpsests. Our mandate is to present a rich dataset with multiple axes for browsing images, and multiple image manipulation tools to facilitate online use. Currently, both the owning institution and the size of the dataset prevent dissemination of these assets via download. Therefore, the website had to meet the needs of very specialized scholars so that they could fully interact with images so that they could decipher illegible text, physical features, and possible relationships between folios. For our project we are using an IIIF-compliant image server and a modified branch of the Mirador viewer. In this presentation, we will review the functional requirements for the online interface, and the way we implemented the Mirador viewer to accomplish an initial proof of concept. We will discuss the key components of Mirador and IIIF that enabled our work as well as some of the challenges of working with rapidly evolving open source software.

http://www.sinaipalimpsests.org/

Bibliometrics and Research Impact at University of Waterloo: An Exciting Campus Partnership

Alison Hitchens
Acting Associate University Librarian, Research & Digital Discovery Services
University of Waterloo

Annie Bélanger
Associate University Librarian, Information Resources & Academic Excellence
University of Waterloo

In 2012, the Bibliometrics Working Group at the University of Waterloo, composed of the Library, the Office of Research, Institutional Analysis and Planning (IAP) and faculty representatives, began its work. In 2015, a new campus position was created, Bibliometrics and Research Impact Librarian, and the white paper "Measuring Research Outputs through Bibliometrics" was released. This specialist librarian also supports the Ranking Working Group and the Research Impact Working Group and is responsible for bibliometrics education across campus for our students and faculty. This Librarian has also been working to create a North American community of practice for bibliometrics work. This project briefing will highlight this campus partnership, lessons learned so far, and questions for future directions and infrastructure requirements for support. Additionally, we will explore possible connections between bibliometrics work, citation analysis and evidence-based collection development practices for a research-intensive University.

Power of Partnership and the Affordable Learning Exchange

Alison Armstrong
Associate Director for Research and Education
The Ohio State University

Affordability is a core value of The Ohio State University and the Affordable Learning Exchange (ALX). Living by that value transforms individuals and the work they do through relationship building and partnership development. ALX is comprised of the Office of Distance Education and eLearning (ODEE), University Libraries (OSUL), the University Center for the Advancement of Teaching (UCAT) and Undergraduate Student Government (USG). We are two years old and just welcomed the second cohort of faculty grant recipients resulting in savings to students of nearly $1 million by the end of 2017, and that is not the most exciting part of our work. The transformations happening in the classroom and to the organization through the deep partnerships developed among the ALX members are truly amazing. This presentation will discuss a few of the faculty grant projects, review how the initiative is being assessed, highlight key factors in the relationship building, and discuss the impact those relationships are having on the organization.

https://affordablelearning.osu.edu/

"But We Don't Do Research Like That Anymore"

Thomas Hickerson
Vice Provost and University Librarian
University of Calgary

The title of this session, "But We Don't Do Research Like That Anymore," is a quotation from an associate dean (research) in the Faculty of Arts at the University of Calgary. His comment was elicited in the fall of 2015 in our discussion of the Library's principal means of supporting faculty research. Soon thereafter, we conducted a series of workshops sponsored by The Andrew W. Mellon Foundation to identify the new forms of support for multidisciplinary research needed by scholars in 15 different disciplines. We reported on our findings at the spring 2016 Coalition for Networked Information meeting. In this presentation, I will describe the next steps being taken to transform our research support environment based on new Library roles and relationships within the University. While driven by the impact of new technologies and research techniques, this model is about shared platforms, service constellations and partnerships, ranging from the performing arts to medicine, and incubating a suite of faculty-led projects, all serving to reposition libraries within the academic research enterprise.

10(+) Years of Deep Blue at the University of Michigan

Jim Ottaviani
Librarian and Repository Manager for Deep Blue
University of Michigan

Deep Blue, the University of Michigan's institutional repository service, launched in 2006. It now provides access to over 100,000 articles, theses, and other scholarly works written by U-M authors. We have succeeded in many ways (some replicable, some not, perhaps) and have also failed to meet our goals in others (many of them typical). In 2016 we launched an additional service, Deep Blue Data, to better handle the data needs of the University. So, as we plan to merge the original and the data services version on the Hydra/Fedora platform, we would like to share our experience and metrics, learn about how other experts are managing and enhancing what they offer, and discuss their plans for the future.

deepblue.lib.umich.edu

Rethinking Repositories

Paolo Mangiafico
Coordinator of Scholarly
    Communications Technology
Duke University

Julie Rudder
Repository Program Librarian
University of North Carolina
    at Chapel Hill

Will Sexton
Head, Digital Production Initiatives
Duke University

Tim Shearer
Associate University Librarian for Digital
    Strategies and IT
University of North Carolina
    at Chapel Hill

At many institutions, repository initiatives provide access, preservation and services for multiple programs—at-risk digital special collections, digitized materials, and the outputs of research, including publications and data. No single software stack, platform, service portfolio, or even library program can support all of these areas. Given this diffusion of stakeholders, needs, and processes, is there a unifying aspect for the institutional repository? If not, then what do we mean by "institutional repository?" In a time where both the needs of researchers and repository technologies are rapidly evolving, what strategies should libraries employ for developing technology, staffing, services, and policies to provide access and preservation for a wide range of institutional assets? In this panel discussion, repository leaders from the University of North Carolina and Duke University will start a conversation by describing their approaches, what they have learned, and how they think these services should evolve. They will pose some provocative questions for discussion with all attendees, and hope to stimulate a better understanding of cohesive approaches for repository programs.

Advancing Accessibility through Libraries

Laura C. Wood
Director of Tisch Library, Associate
    University Librarian for Research
Tufts University

Joseph (Jody) D. Combs
Visiting Program Officer for
    Accessibility, Association
    of Research Libraries
    (ARL)
ARL/Vanderbilt University

Beth Sandore Namachchivaya
Associate University Librarian for
    Research
University of Illinois at Urbana
    Champaign

Chances are that your institution has a significant and growing number of accessible, digital course materials and they are not in a searchable collection in the library. Nearly every college or university is busy meeting accommodation requests from students with disabilities. Libraries can bring needed expertise and coordination to this work and contribute to student success for students with disabilities, a growing population that exceeds 10% of the student body. This panel will provide an update and discussion on three accessibility initiatives: an Institute of Museum and Library Services (IMLS) planning grant for repository services, the Association for Research Libraries (ARL) captioning initiative, and a pilot at the University of Illinois to contribute DAISY files to the HathiTrust Digital Library. The IMLS grant has studied the needs of Disability Resources & Services (DRS) staff and documented the needs and opportunities for libraries and DRS offices to work together, manage content nationally, and share accessible content to reduce duplication of effort. We will review lessons learned and outline steps forward. The ARL captioning initiative focuses on issues regarding mixed media and accessibility. It is currently researching issues regarding the tools, integration, interoperability, scope and infrastructure for different possibilities for developing shared or individual repositories of captioned files.

http://tischlibrary.tufts.edu/AccessibilityRepository
http://www.arl.org/news/arl-news/4176-joseph-d-combs-jr-appointed-arl-visiting-program-officer-for-accessibility

Open Persistent Identifier Infrastructures:
The Key to Scaling Mandate Auditing and Assessment Exercises

Geoffrey Bilder
Director of Strategic Initiatives
Crossref

With the steady increase in research outputs, and the increasing number of active researchers from both academia and industry, research stakeholders find they need to be able to automate workflows in order to scale their systems efficiently. Funders want to be able to track the outputs that arise from research they have funded. As a result, institutions find themselves having to regularly analyze and summarize the research their faculty produce. Faculty, in turn, are facing increasing accounting bureaucracy in order to meet all the reporting requirements that are cascading through the system. And finally, publishers are seeking to make the manuscript submission and evaluation process more efficient as well as to increase the discoverability and richness of their publications. The key to scaling these activities is to take advantage of the open identifier and metadata infrastructures that have been developed by the industry. This talk will explore existing and emerging industry initiatives to develop open, robust, international and interdisciplinary identifier systems to help manage the increasing reporting requirements of the academia.

Update on FOLIO, OLE, and the Open Library Foundation

Dean Krafft
Chief Technology Strategist
Cornell University

David Carlson
Dean of University Libraries
Texas A&M University

Sebastian Hammer
President
Index Data

FOLIO is a community of librarians, designers, developers, service providers, and vendors working to develop an open source library services platform. FOLIO began in early 2016, and includes partners at EBSCO, Index Data, and the OLE Partnership. Over the last year, teams from these collaborators have worked towards the first code release in August of 2016, with continuous releases since. The OLE Partners have been active in FOLIO from the beginning and have restructured their effort to fully support FOLIO. OLE has worked with EBSCO and Index Data to set up community infrastructure for large scale and distributed design and development work. Part of that infrastructure is the Open Library Foundation, a new not-for-profit organization chartered to support open source community efforts. The Foundation seeks to enable, support and sustain efforts like FOLIO by creating an open forum for discussion about library management issues, and action to develop solutions. In this session, principals from the OLE Partners, Open Library Foundation, and FOLIO communities will provide updates and chart shared future directions. Learn about how open source communities restructure and evolve for innovation and inclusiveness. And learn how librarians, designers, software developers, and commercial vendors can collaborate to advance the scope of library technologies.

http://openlibraryenvironment.org
http://openlibraryfoundation.org
http://folio.org

When Data Analytics and Big Data/Data Science Move to the Library

Karim Boughida
Dean of University Libraries
University of Rhode Island

Joan Peckham
Professor and Chair,
    Department of Computer
    Science and Statistics
University of Rhode Island

Kimberly Pierson
Interim Director of DataSpark
University of Rhode Island

Harrison Dekker
Associate Professor
Data Services Librarian
University of Rhode Island

"When Data Analytics and Big Data/Data Science Move to the Library" (Boughida et al)

Why should librarians and information/data specialists care about data science? The interdisciplinary field of data science will be a significant and growing area of focus for our field, arguably redefining the future of librarianship and information science. It is rare for research libraries to acquire a data analytics program and serve as the umbrella entity for big data and data science at an academic institution. This panel will discuss how the University of Rhode Island (specifically libraries) was involved in acquiring the state's longitudinal and integrated data system Dataspark, and how the Big Data Collaborative that includes participation of students, staff and scholar educators from multiple colleges is going to be positioned within the library and beyond.

"Beyond Research Data Management: Emerging Trends in Library Support for Computational Research" (Dekker)

This briefing will explore how librarians are discovering opportunities to provide new forms of support to students and researchers engaged in computational research. Examples include librarians teaching and consulting on basic programming skills, data visualization, database management and reproducible research practices. I'll explore some possible explanations of this trend and how librarians can take advantage of emerging programs like Library Carpentry to develop proficiency and build communities of practice in these areas.

http://datasparkri.org/

Preserving Digital Content at Scale:
Active Digital Preservation and Data/Metadata Migration

Carolyn Caizzi
Repository and Digital Curation
Northwestern University

Karen Estlund
Associate Dean for Technology
    and Digital Strategies
Pennsylvania State University

Lee Konrad
Associate University Librarian for
    Technology Strategies and Data
    Services
University of Wisconsin

Nick Ruest
Digital Assets Librarian
York University

Mary Molinaro
Executive Director
Digital Preservation Network

As institutions acquire and create more and more digital content it has become a problem to manage the workflow at an institutional level. Digital projects have been funded through different funding streams, stored in different places, and have metadata assigned in different ways creating confusion about how to prioritize and manage the preservation of this content. The focus of content stewardship is shifting from being application-centric to data-centric, with the understanding that content must move through time. In order to provide effective content stewardship and mechanisms to move repository data during content/data migrations and to preservation systems, significant efforts are needed for various import, export, verification, and management services.

This panel will present case studies in moving content through preservation activities with APTrust, the Digital Preservation Network, MetaArchive, and local applications through cases at the University of Wisconsin, Northwestern University, Pennsylvania State University, and recent work in the Fedora community. The presentations will highlight common methodologies, present new initiatives, and elicit group discussion on strategic and sustainable planning for active digital preservation.

https://wiki.duraspace.org/display/FF/Design+-+Import+-+Export
http://dpn.org/
http://aptrust.org/
http://metaarchive.org/

Capacity Building for Digital Scholarship Services

Ashley Sanders
Director of the Claremont Colleges
   Digital Research Studio
Claremont University Consortium

Louisa Lam
Head of Research Support &
   Digital Initiatives
The Chinese University of Hong Kong
   Library

"Building Capacity for Digital Humanities in the Library: A 'Learn by Doing' Approach" (Sanders)

Using the Claremont Colleges Library (CCL) as a case study, this presentation will offer ideas and suggestions about how to build capacity within the library and the broader campus community to support and advance digital humanities projects and digital scholarship, more broadly. The CCL has taken a "learn by doing" approach, offering a five-week short course in digital humanities (DH), encouraging library staff to work on their own DH projects, and providing dedicated time for these exploratory endeavors. In the short course that launched the digital scholarship professional development series, participants examined a variety of digital research methods, including data visualization, spatial and temporal visualizations, network analysis, and topic modeling. Each week, this seminar-style course asked librarians and staff to consider how scholars in various fields might employ these approaches and how each method may be used within the context of librarianship. The professional development series will be presented, along with commentary about what has worked well so far and lessons learned. This presentation will be useful for administrators at institutions that already offer a suite of services to support digital scholarship. It will be especially applicable for those at institutions that are interested but unsure how to begin, particularly when there are few, if any, positions dedicated to digital scholarship.

"Experimenting with Digital Scholarship Service at the Chinese University of Hong Kong Library: Challenges and Future Directions" (Lam)

On March 17, 2016, the Chinese University of Hong Kong Library launched its first Digital Scholarship Lab at the Library as one of the key components of the Library's Digital Scholarship Service. Digital scholarship research is not very active at the University, and the Library sees a niche to offer support in this arena. The Lab is to provide a cutting-edge space for researchers in all disciplines to gather and immerse in digital scholarship research and other collaborative research work. It is also intended to create opportunities to engage faculty and researchers to foster collaborations in digital scholarship projects. A range of

services is also offered to promote digital scholarship research; both research-related and teaching-related activities are held in the lab. After one year of operation, there have been both successes and challenges. This presentation will discuss how the library tackled the challenges encountered in building the lab, how the lab is equipped to facilitate flexibility and collaboration, the services offered, the journey to experiment with different modes of operation (including staffing), the efforts made to engage scholars and researchers, the successes that have been achieved, and the lessons learned. Use cases and data will be presented to show how research support services and the roles of librarians in supporting digital scholarship research have been transformed.

Intro to Digital Humanities short course for librarians: http://dhatccl101.com
Digital Scholarship Workshop Materials: http://libguides.libraries.claremont.edu/digitalscholarship/
http://lib.cuhk.edu.hk/en/libraries/ul/dsl
http://lib.cuhk.edu.hk/en/research/digital-scholarship/space

A CAVEkiosk in the Library:
The At-Risk Cultural Heritage and the Digital Humanities UC Catalyst Grant

Declan Fleming
Chief Technology Strategist
University of California San Diego

This session will provide a briefing on the At-Risk Cultural Heritage and the Digital Humanities University of California (UC), Catalyst grant work, specifically on the 3D CAVEkiosk installed in the University of California San Diego (UCSD) Geisel Library. The Cave is an interactive display for work which is being done at UCSD (Tom Levy) in collaboration with archaeology faculty at UC Berkeley (Benjamin Porter), UC Merced (Nicola Lercari) and UC Los Angeles (Willeke Wendrich), incorporating more than 10,000 years of cultural materials, architecture and landscapes. The grant includes site and artifact identification, cataloging, and digital preservation of complex data and other content derived from satellite imagery, drones, sensors, 3D data capture, and other techniques. The platform is expected to enable correlative studies of regional climate/environmental data and demographic, cultural, and technological changes, as well as the creation of 3D models using new kinds of geospatial data. It will also enable studies of how human conflicts, climate change, pollution, natural disasters, and looting affect archaeological sites and forecasting of critically-endangered places.

http://ucsdnews.ucsd.edu/pressrelease/
uc_san_diegos_thomas_e._levy_among_recipients_of_presidents_research_cataly
http://ccas.ucsd.edu/

Collaborating to Digitize Paleontological Collections at the University of Wyoming

Chad Hutchens
Head of Digital Collections
University of Wyoming

Academic libraries and museums are increasingly collaborating on digitization, metadata aggregation, and data management to offer access to objects that rarely see the light of day in many small museums. The University of Wyoming Libraries and the UW Geological Museum have been working together to make physical objects (largely vertebrate fossils) available in 3D formats to anyone with an Internet connection. Despite an incredible lack of standards and best practices, we have learned not only how to digitize fossil objects (large and small) in 3D, but also how to offer online access to these objects as well as how to archive them for future use.

http://hdl.handle.net/10176/wyu:167616

Building a Deeper Bench:
Training Students to Provide Digital Scholarship Support

Joe M. Williams
Interim Associate University Librarian for Collections and Services
University of North Carolina at Chapel Hill

This program highlights one new way that University of North Carolina Libraries services are enabling pedagogical and curricular change: by training Library student employees to provide substantial digital scholarship support. Historically, the Libraries have helped drive pedagogical change in four ways: 1.) Working directly with instructors on courses, assignments, and in curricular groups, 2.) Partnering with campus support organizations (e.g., teaching & learning center) to deliver programming, 3.) Introducing students to new skills and technologies through direct consultation and instruction, and 4.) Providing and integrating technology-enabled spaces into research and instruction. Recently, we have identified a fifth method: training and mentoring student employees in the delivery of digital scholarship research assistance. Training students to provide significant digital scholarship support gives them a hands-on work experience, engages them in new types of research, and develops their skills with emerging tools and practices. It also allows the Library's many digital scholarship services to scale more readily, providing librarians with more time to engage with researchers on larger, complex projects and questions. In this session, we discuss the kind of work our students engage in, the growth of our training programs, and the curriculum that is beginning to emerge through our experience. We will draw from three examples:

- Graduate students in the Science Library's Makerspace providing 3D printing and 3D scanning consultations and instruction to faculty and students.
- Graduate students in the Undergraduate Library developing tutorials and teaching workshops on digital media creation, including social media graphics and infographics.
- Graduate and undergraduate students in the Davis Library Research Hub providing consultations and project support on a range of tools, from Tableau to Python.

Co-authors, not presenting: Suchi Mohanty, Head, R.B. House Undergraduate Library; Amanda Henley, Head, Digital Research Services; Danianne Mizzy, Head, Kenan Science Information Services

http://library.unc.edu/hub/project-gallery/ http://skillful.web.unc.edu/ http://library.unc.edu/events

Open Collections:
A Holistic Approach to Digital Collections Discovery and Delivery

Paul Joseph
Systems Librarian
University of British Columbia

Bronwen Sprout
Head, Digital Programs and
 Services
University of British Columbia

Open Collections is a discovery and delivery service developed by University of British Columbia (UBC) Library as an innovative approach to providing access to the Library's managed and curated digital objects. Open Collections was born out of an idea to provide unified indexing, discovery and access to the Library's digital objects, regardless of the repository the objects are managed in. The Library currently utilizes CONTENTdm, DSpace, AtoM and Dataverse for managing its digital objects. Rather than embarking on a project to consolidate repositories to a new framework like Hydra or Islandora, the Library chose to develop a service that improves discovery and delivery of both metadata and the digital objects to researchers and the general public. This presentation will cover the genesis of Open Collections, the development of the aggregated metadata model and unified Elasticsearch index, the suite of discovery and delivery services via the Open Collections API, and the next steps for Open Collections and UBC Library.

https://open.library.ubc.ca

Exploring Data Management Support Needs of Bioengineering and Biomedical Research Faculty

Christie Wiley
Engineering and Physical Sciences Research
     Data Services Librarian
University of Illinois Urbana-Champaign

This study explores biomedical and bioengineering researcher attitudes and practices regarding data management and sharing. Outcomes include a better understanding of researchers' data management practices and knowledge and use of campus data services by National Institutes of Health grantees.

Margaret Burnett was a study co-author.

Building Distinctive Collections through International Collaborations: Lessons from UCLA's International Digital Ephemera Project

T-Kay Sangwand
Librarian for Digital Collection
Development
University of California, Los Angeles

Todd Grappone
Associate University Librarian
for Digital Initiatives and
Information Technology
University of California, Los Angeles

In 2012, the University of California, Los Angeles (UCLA) Library developed the International Digital Ephemera Project and has since embarked on a series of international collection and technology driven collaborations with cultural heritage partners in Africa, the Caribbean, and the Middle East. Through these collaborations the UCLA Library works with its partners to build up their technical infrastructure, expertise and capacity to preserve and provide access to unique documentation that is valuable for the historical record as well as for research and scholarship. These partnerships require that libraries consider alternatives to traditional collecting models based on physical custody and ownership of materials and encourage us to leverage technology for the benefit of each institution involved. This project briefing will discuss the lessons, risks, ethical questions, and opportunities that arise when implementing these partnerships to build unique collections. How can building a global library without walls impact an increasingly multilingual and multicultural campus research community? What are the risks involved in engaging in external partnerships and how is success defined?

http://idep.library.ucla.edu/

Digital Preservation in Production:
DPN and DuraCloud Vault - Year 1

Bill Branan
Hosted Services Technical Lead
DuraSpace

David Pcolar
Chief Technology Officer
Digital Preservation Network (DPN)

After a considerable planning and development effort, the Digital Preservation Network (DPN) officially began accepting content submissions in 2016. The journey into production operation required that many hurdles, both technical and administrative, be overcome and that the procedures surrounding long-term distributed digital preservation be defined. This talk will provide an update on some of the critical choices that were made, what content has been submitted to date, and the process needed to make those submissions possible. We will also explore lessons learned by DPN and DuraCloud Vault, one of the DPN nodes, in this first year in production.

http://dpn.org
http://duracloudvault.org

New Incentive Infrastructure for Sharing Data and Other Research Outputs

Bommae Kim
Research Methodologist
Federal Reserve Bank of Kansas City

We propose a new incentive infrastructure for the sharing of data and other research outputs to change research culture and practices. Three problems exist with the current infrastructure that impede sharing research outputs. First, the current infrastructure is top-down and requirement focused and has limited incentives for sharing research outputs. Second, research papers and other research outputs are treated as one and the same. Finally, other research outputs match perfectly and in the same authorship order as research papers. In this presentation, we argue that research outputs need to be treated as separate items with separate authorship requirements. This new infrastructure will recognize traditionally neglected labor from junior researchers, facilitate flexible and interdisciplinary collaboration, and promote voluntary sharing of data and other research outputs with higher quality.

Collaborative work with Brett Currier.

The Role of Academic Libraries in an Era of Fake News, Alternative Facts, and Information Overload

Donald A. Barclay
Deputy University Librarian
University of California, Merced

Recent news reports of large segments of the population falling for fake news stories came as no surprise to academic librarians who have spent years watching students struggle with the challenges of discovering, internalizing, evaluating, and applying credible information. After all, making sense of information has always been hard, and people today are confronted with the most complex and crowded information landscape in human history. This hot-button presentation focuses on what the role of academic libraries should be in helping individuals make sense of a world bursting at the seams with information—some of it completely unreliable. Reflecting on our history of promoting information literacy, librarians and other information professionals need to ask ourselves which instructional approaches we should keep, which we need to change, and how we might use technology to improve our success in helping students become information-literate scholars and citizens.

https://theconversation.com/the-challenge-facing-libraries-in-an-era-of-fake-news-70828
http://www.ala.org/acrl/standards/ilframework

Software Carpentry in the Library:
Partnering to Give Researchers Needed Technical Skills

Sarah Clayton
Digital Scholarship Specialist
University of Oklahoma

Carl Grant
Associate Dean, Knowledge
    Services & Chief
    Technology Officer
University of Oklahoma

Basic programming and data management skills have become invaluable for creating reproducible research; however, this training is rarely included in graduate curriculum. Major grant-funded projects may be able to hire someone to provide these services, but the majority cannot. Recognizing this need, the University of Oklahoma Libraries has partnered with Software Carpentry, a non-profit foundation that offers two-day, hands-on workshops on basic programming skills designed to help researchers automate and track their research processes. The University Libraries has offered 12 local workshops since 2014 with over 300 faculty, graduate students, and staff from over 30 departments and research groups participating. We offer the workshops multiple times each semester—one before the semester starts, one during the middle of the semester, and one at the end of the semester. We have found that offering the mid-semester workshop during the week of Thanksgiving or Spring Break increases attendance since participants are more likely to be able to have two full days available. Each workshop is taught by library staff including experts in data management, informatics, and digital scholarship. By having library staff teach and attend the workshops, our team has gained a better understanding of our local researchers' needs. The sessions also allow researchers to connect and develop relationships with specialists in the library, who can guide them through more advanced data and programming issues. Developing these relationships has helped to position the University Libraries as a nucleus for research on campus. During this briefing, attendees will learn best practices that have resulted from our experiences in planning and implementing such a program.

Institutional Repository Strategies:
What We Learned at the Executive Roundtables

Clifford Lynch
Executive Director
Coalition for Networked Information

The Coalition for Networked Information (CNI) held two sessions of the Executive Roundtable "Rethinking Institutional Repository Strategies" just prior to the start of this membership meeting. There was high demand for participation in these events, so while we will produce a written summary, this session is intended to summarize and to some extent synthesize what we heard and what we learned. I'll review the questions that framed the Roundtable and the major themes that surfaced.

The focus of the Roundtable was to share strategies, policies, experiences, and perspectives on institutional and consortial activities in this area. Some potential topics on the table included the evolution of thinking about the purpose and objectives of different IRs, assessing IRs, uptake of repositories by various sectors of institutional populations, barriers to success, use of cloud services/platforms for IRs, and interfacing with SHARE, CHORUS, and disciplinary and funder repositories.

Developing Library Technology Infrastructure: Two Perspectives

Kevin Comerford
Director of Digital Initiatives and
  Scholarly Communication
University of New Mexico

Karl Benedict
Director of Research Data
  Services
University of New Mexico

Antonio Guillermo Martínez
Founder and CEO
Libnova

Anthony Helm
Head of Digital Media
  and Library Technologies
Dartmouth College

"Building Digital Preservation Infrastructure: Partners, Tools and Services" (Comerford et al)

Over the past year the University of New Mexico (UNM) Libraries instituted a new digital preservation initiative that was literally built from the ground up. Initially conceived as a means to preserve the libraries' digital collections, the project involved developing program structure, improving tools and working with vendors. As the project developed, the digital preservation needs of a broader community than originally planned became vividly apparent, and it evolved into a much larger endeavor that includes preservation of research data, university archives and digital cultural heritage collections from partner institutions around the state. The presenters will discuss their experiences implementing digital preservation at UNM, and talk about how the initiative is starting to encompass the preservation needs of partner organizations.

"XCDAS: The Evolution of a Standards-Based Library Repository System at Dartmouth" (Helm)

The Dartmouth College Library has been working with digital objects in its collections for several years and currently maintains a variety of vended, open source, and locally developed solutions to manage and deliver these objects to the local and global online research community. In 2011, following the creation of "The Dartmouth Digital Library Program Plan" and with work underway on the National Endowment for the Humanities-funded project to create a Scholarly Digital Edition of the papers of Samson Occom, the Library began to coalesce its development strategy around a stack of predominantly open source software

already being used to manage XML documents since the early 2000s, rather than to pursue the emerging Hydra technology stack. The result is XCDAS (XML Collections and Digital Archive Storage), an ever-evolving set of tools to manage TEI text collections, e-books, maps, posters, and manuscripts. The current system is managing over 200,000 bagged objects, over 200,000 derivative files, and 1500 XML documents. This presentation gives an overview of the technical infrastructure and of the system itself, which includes tools for working with master file packages, generating derivative files, performing archive validation and consistency checking, converting simplified markup to TEI, and for
publishing web sites via XSL transformations.

http://library.unm.edu/services/disc.php

Perma.cc: Ensuring the Integrity of the Digital Scholarly Record

Adam Ziegler
Managing Director, Harvard Library Innovation Lab
Harvard University

Citation to persistent sources is fundamental to all academic work. Libraries have traditionally collected, organized and preserved those cited sources. Citations today, however, increasingly refer to web pages, not just print sources. Because web pages change their content and disappear all the time, citations to them are ineffective at best and, at times, misleading. This problem, known as "link rot" or "reference rot," means that much of our citation-dependent scholarship is being written on sand. Perma.cc is one solution to combat link rot. Unlike other web archiving services, such as ArchiveIt, Perma.cc relies on the creator of the work to do the archiving at the time of citation. Authors take snapshots of web pages they cite and deposit them in the Perma.cc service. Once deposited, Perma.cc assigns the web page a unique Perma URL (e.g. https://perma.cc/F37P-2E4V) that authors can add to the original URL in their citations. Should the original link later rot or be changed, readers can follow the Perma.cc URL to view the original source. Perma.cc was originally developed for use by the legal community but has received a National Digital Platform grant from the Institute for Museum and Library Services to broaden its use beyond the legal community. The service is now free to all colleges and universities. Libraries serve as the registrars for the Perma.cc service and provide support for their institutions' users. This presentation will provide an overview of the service, the role the library plays, and instructions for signing up.

http://perma.cc

Supporting Scholarly Research Practices at Scale in the Humanities:
A Deep Dive into Faculty Research Practices in Art History, History and Religious Studies

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    Scholarly Communication
    Program
Ithaka S+R

Roger Schonfeld
Director, Libraries and
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Substantial evidence from many sources shows that digital innovation has led to changing research practices among some humanities faculty, necessitating the creation of new forms of expert consultation and training in technologies. But, which of these needs for new services among early adopters are becoming the needs of the faculty-at-large? In this presentation we compare findings across three of Ithaka S+R's large-scale cross-institutional qualitative research projects on scholars in history (2012), art history (2013) and religious studies (2017) focusing on their adoption of new research methods, and their approaches to information discovery and information management. In this presentation, we will examine both disciplinary and shared needs and suggest opportunities for more systematic approaches to delivering the research support needs of humanists. As many institutional programs are still in the early phases of creating programs to support emerging research activities, understanding how the wider humanities field is engaging with digital innovation is crucial to identifying and prioritizing which initiatives should be scaled up, how and by whom.

http://www.sr.ithaka.org/services/research-support/

Successful Open Educational Resources Initiatives:
The Winning Formula

Nicole Finkbeiner
Associate Director, Institutional Relations
Rice University

This presentation will highlight the most effective strategies to encourage faculty to adopt OER (open educational resources) while protecting academic freedom, how to write an effective plan to increase OER use, and what key benefits to students and faculty to focus on while discussing OER with your administrators, faculty and students. The session will also include discussion of the journey of Rice University's successful OER project, OpenStax, and especially the lessons Rice University learned along the way that are applicable to any college or university developing an OER initiative.

www.openstax.org
www.cnx.org

Semantic Web Identity:
A New Opportunity for Libraries to Improve Machine Comprehension of Academic Organizations and Concepts

Kenning Arlitsch
Dean of the Library
Montana State University

Justin Shanks
Semantic Web Identity
Researcher
Montana State University

Internet search engines have difficulty understanding academic organizations due to a lack of structured data records on the Semantic Web. This poor understanding impedes the ability of search engines to refer users to the organizations and limits the information search engines can hand to semantic technologies, such as mapping and voice-activated applications. Semantic Web Identity (SWI) is the condition in which search engines understand the existence and nature of entities. The display of a Knowledge Graph Card in Google search results is an indicator of SWI, as it demonstrates that the search engine has gathered verifiable facts about the entity. SWI may positively impact the award of research funding, student enrollment, faculty recruitment, and even university rankings. This presentation summarizes research conducted for a recent doctoral dissertation, showing that SWI is poor for Association of Research Libraries (ARL) libraries and that this condition extends to many other academic organizations. The situation presents a bold new opportunity for academic libraries, and this presentation will also provide a case study of Montana State University Library's success in offering SWI services to campus organizations.

Dissertation: http://scholarworks.montana.edu/xmlui/handle/1/12517
Data set: http://doi.org/10.15788/M2F590
Semantic Web Identity Services at Montana State University:
https://www.lib.montana.edu/services/semantic-web/

Protect Researcher Privacy in the Surveillance Era

Sam Kome
Director of Strategic Initiatives & Information Technology
Claremont Colleges

With the combination of Wireless, Proxy, and ILS data, libraries today have a 360 degree, highly granular view of researcher activity. These data are valuable for operational decisions, however they have immense privacy implications. We will examine these data, their beneficial uses, and the necessary steps needed to protect researchers.

This presentation will be most relevant for libraries with: centralized wireless; centralized authentication; e.g. CAS, LDAP, Shibboleth; EZProxy or other web proxy to electronic resources, and designated patron type (faculty, undergraduate, etc.) information either in the ILS or in the CAS/LDAP/Shibboleth.

Task Force on Technical Approaches to Email Archives: Update and Discussion

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    Professor, University Archives
University of Illinois at Urbana-
    Champaign

Kate Murray
Information Technology
    Specialist, Digital
    Collections & Management
    Services
Library of Congress

The Task Force on Technical Approaches to Email, formed in September 2016 and sponsored by The Andrew W. Mellon Foundation and the Digital Preservation Coalition, is charged with (a) reexamining and assessing current efforts to preserve email; (b) articulating a conceptual and technical framework in which these efforts can operate not as competing solutions, but as elements of an interoperable toolkit to be applied as needed; and (c) constructing a working agenda for the community to refine this technical framework, adjust existing tools to work within this framework, and begin to fill in missing elements. The Task Force will prepare a report of its findings. The report will include recommendations concerning the specific actions that those interested in email archiving can take to demonstrate within 2-5 years that archives can safely accession and preserve records of human expression in the form of email. In this project briefing, Task Force co-chairs Chris Prom and Kate Murray will report on the Task Force's work to date and will solicit feedback and input. This input is critical in helping Task Force members shape the final report and recommendations, which will be issued in late 2017.

http://www.emailarchivestaskforce.org/

Solving Scholarly Publishing Problems by Building Upon Institutional Repositories: Two Case Studies Based on the Digital Commons and Islandora Platforms

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University of Wyoming

Karl Benedict
Director of Research Data
   Services
University of New Mexico

Jon Wheeler
Data Curation Librarian
University of New Mexico

"Building an Islandora Data Repository Using an External DDN Storage Infrastructure" (Hutchens)

The University of Wyoming Libraries have partnered with UW's Advanced Research Computing Center (ARCC) to provide a campus research data repository. Coupling the Libraries' experience with Islandora and Fedora along with ARCC's expertise in high performance computing and storage, we successfully launched the UW Data Repository in September 2016. We now offer all campus researchers single sign-on authentication for dataset and metadata submission, simultaneous DOI assignment and DataCite metadata deposit via the EZID API, as well as unlimited file size storage capacity (something not achievable using Islandora version 7 alone). Using an "endowment" business model to fund storage costs, we have made this service free to all campus users who wish to share their data. Like all solutions, we've encountered numerous problems along the way, our implementation has its drawbacks, and we certainly have more work to do.

"Leveraging IR Collections as Distributed Service Layers" (Benedict, Wheeler)

Consideration of the research impact and organizational value of institutional repositories (IR) highlights the utility of defining and evolving innovative IR service models. As a particular example, the integration of OAI-PMH utilities and custom application programming interfaces (API) within widely adopted IR platforms including Digital Commons and DSpace enable repository managers to develop and promote unique services around IR as content stores for external research systems. In this project briefing, librarians from the University of

New Mexico will describe the development of a spatially enabled discovery service that interacts dynamically with a Digital Commons-hosted collection of documents pertaining to Native American Water Rights Settlements (NAWRS). By extending Digital Commons' OAI-PMH metadata schema to incorporate point and polygon representations of the areas referenced within NAWRS documents, librarians were able to build transparent, dynamic linkages between the IR and the externally hosted spatial discovery portal. The resulting service adds value to both endpoints. This project briefing will include a description of the metadata enrichment and OAI-PMH harvest workflows, together with an overview of how the harvested metadata and documents are incorporated within the discovery portal architecture to best leverage the complementary capabilities of Elasticsearch, AngularJS, and the OpenLayers web mapping framework.

http://data.uwyo.edu

Social Networks and Archival Context:
In Transition from Project to Program

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Social Networks and Archival Context (SNAC) began as a research and development project in 2010, and in 2015 began to transition to an ongoing cooperative program. This project update will focus on the technological and social changes required to make the transition successful. The transition has required that the underlying technology platform be completely transformed, transitioning from the aggregation of data from multiple sources using a multi-step batch process to a platform supporting both batch ingest of new data and ongoing human curation of the data. Given that the data will be cooperatively maintained to benefit the members and end-users, a major focus of the social transition has been on governance: editorial policy and standards; technology requirements; communication; and training. The project update will focus on the current status of the transition and future plans for continuing and completing the transition. SNAC has received funding from the National Endowment for the Humanities, the Institute of Museum and Library Services, and The Andrew W. Mellon Foundation.

http://socialarchive.iath.virginia.edu/

The Continuing Evolution of Library High Technology Collaborative Spaces: Infocommons, Digital Scholarship Centers, Makerspaces, and More

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Dean of Libraries
University of North Texas

Joan Lippincott
Associate Executive Director
Coalition for Networked Information

Liz Milewicz
Head, Digital Scholarship Services
    Department
Duke University

High technology collaborative spaces in academic libraries have evolved in a variety of interesting ways over the past two decades. In this session, we will explore developments in facilities termed information or learning commons, digital scholarship centers, makerspaces, media studios, and others. We will review the results of a recent survey on information commons and an associated trends monograph under development. We will explore variations in implementation of newly configured and technology-enabled library spaces, and present our views of the successes and perceived missed opportunities of such facilities as they have developed over the past two decades. The presenters will invite observations from the audience regarding these trends.

http://www.projectinfolit.org/joan-lippincott-smart-talk.html

Sustainability of Community-owned Repository Software:
A Call to Action

Andrew Woods
Technical Lead, Fedora
Duraspace

Mike Giarlo
Technical Manager, Hydra-in-
 a-Box
Stanford University

Nick Ruest
Digital Assets Librarian
York University

Sustainability of open-source software is a continual challenge in the relatively small world of cultural heritage institutions. The challenge is amplified due to the critical preservation implications tied to institutional commitments; cultural heritage institutions are expected to preserve and provide access to repository-held data into the foreseeable future, and yet our models for shared software governance are relatively immature, and commitments to software sustainability ebb and flow over time. The cultural, financial, and philosophical dimensions of the community surrounding the software play as much, if not more, of a role in a project's sustainability as the technology itself. With a collective thirty years of experience grappling with these challenges, the speakers will offer varied perspectives on approaches to ensuring the software that supports the long-term preservation and accessibility of our digital heritage will still exist tomorrow. This session will dive deeper into the specific challenges faced by a few open-source repository software communities, outlining what the Islandora, Hydra, and Fedora communities have done to address sustainability in their projects, past and present, and how well these measures have succeeded. Specific tactics for engaging in these projects will be offered as a call to action.