

# Information Technology at YUL

**Michael Dula**  
*CTO, Yale University Library*

April 9, 2014

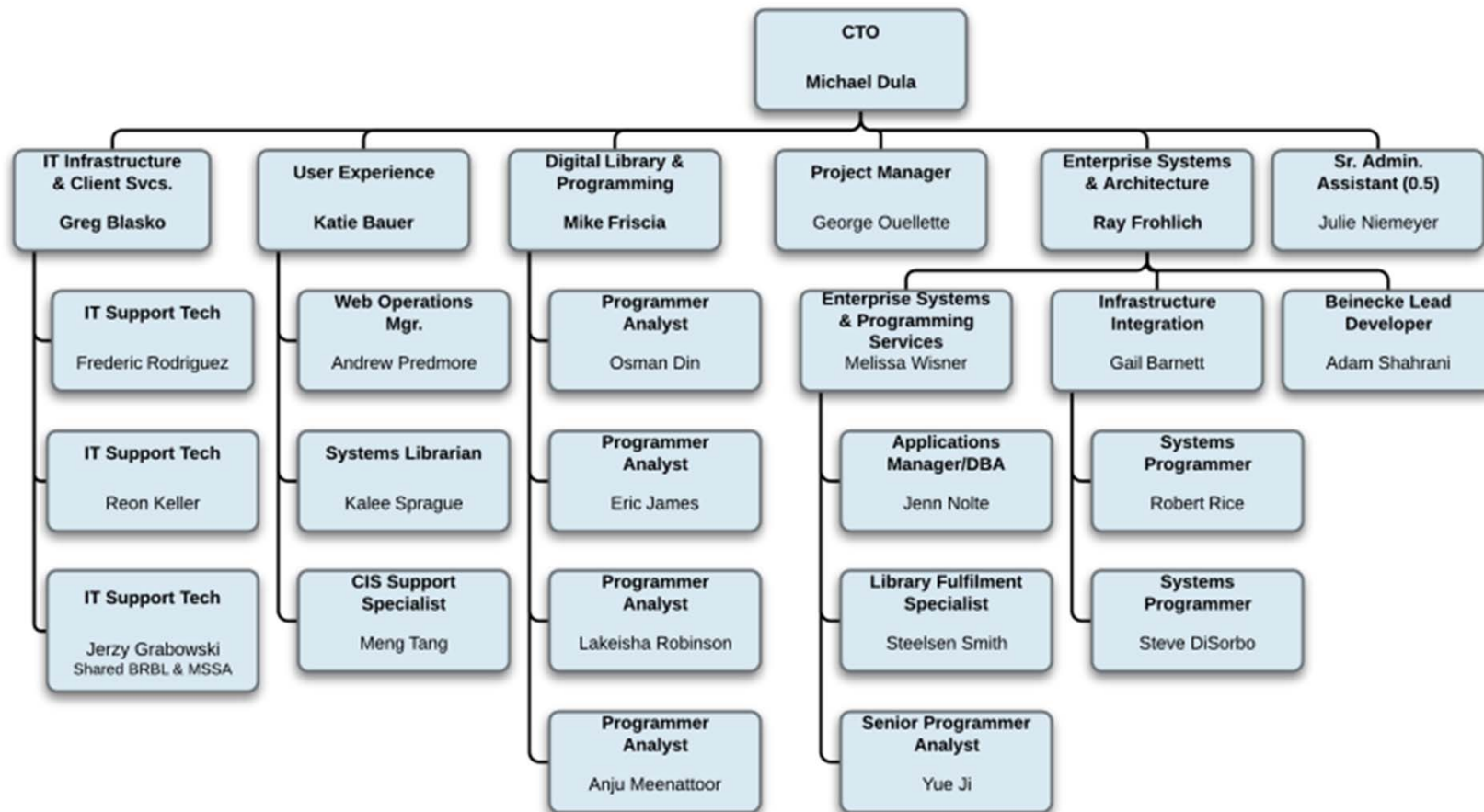


- **Library IT: 25 staff**
  - Enterprise Systems
  - Systems Infrastructure and Integration
  - Digital Library & Programming Services
  - Workstation and Technology Services
  - User Experience

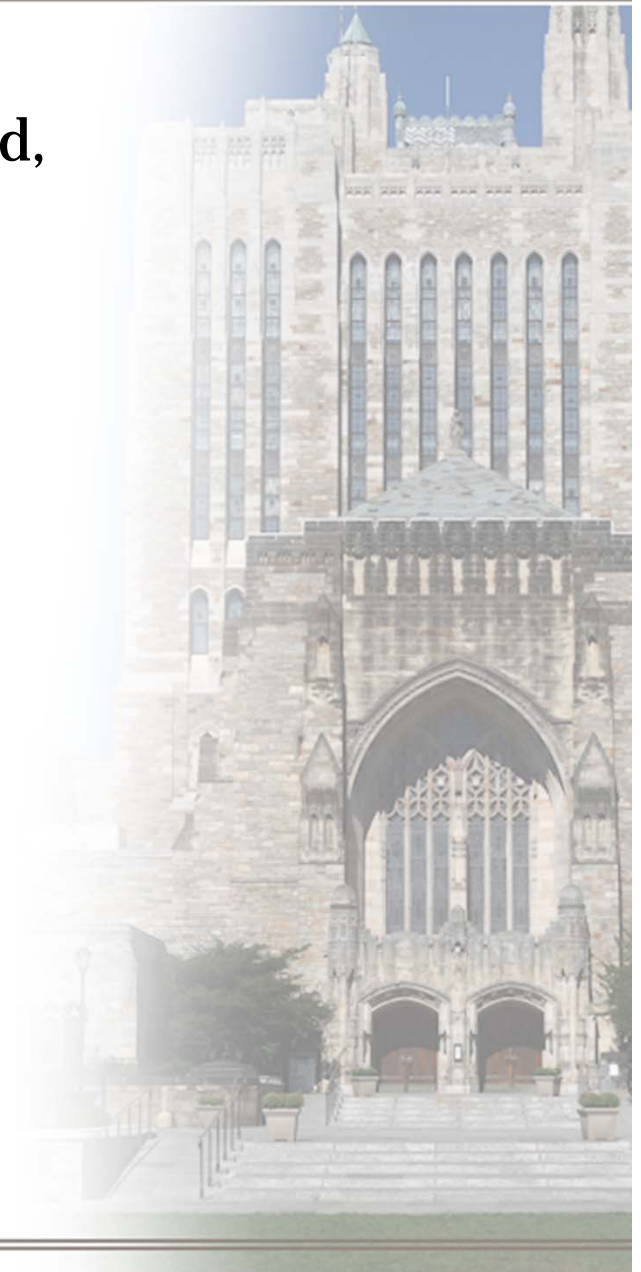


# Organization Chart

Yale



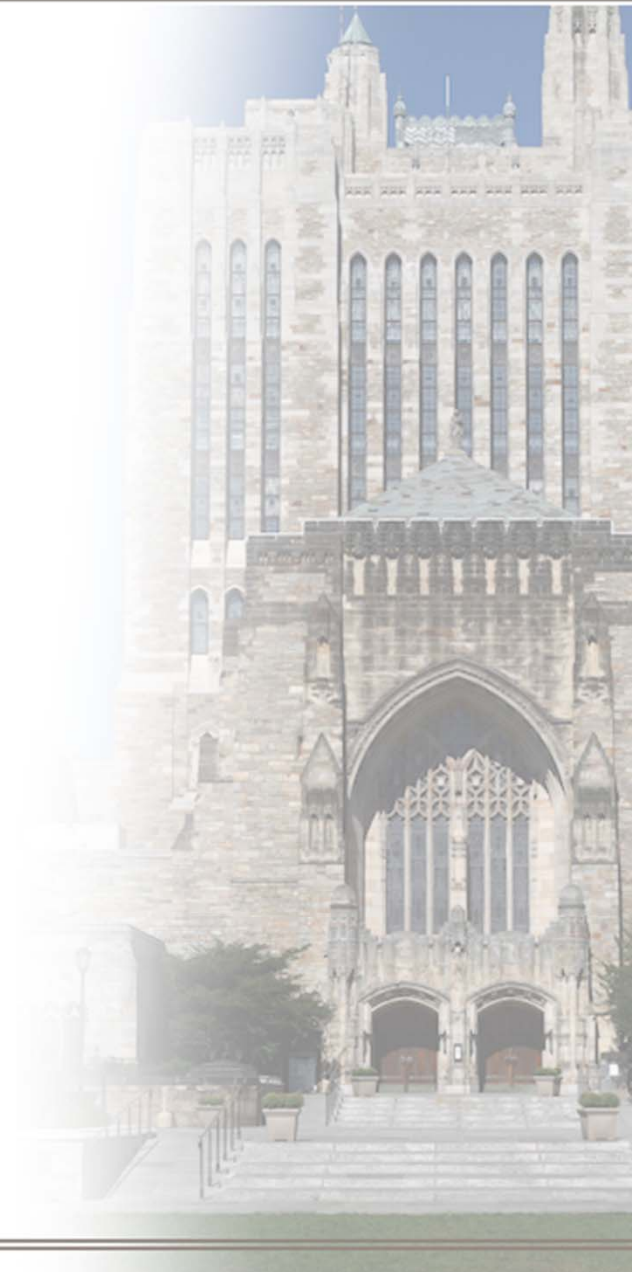
- **Digital Collections Infrastructure**
  - Hydra, Fedora, Blacklight, SOLR, LadyBird, EAD support, Workflow
  - Server and Storage Architecture
- **Building Digital Collections**
  - Arcadia 4 collections
  - Arcadia 5, YIPP, Day Missions
  - Kissinger and Fortunoff
  - Migration of old collections
- **Discovery**
  - Summon
  - Serials Solutions Suite
  - Blacklight



- **Web Redesign and Mobile Strategy**
  - Migration to Drupal and YaleSites
  - Responsive Design
  - SpringShare suite and integration with ClassesV2
- **Atlas Systems**
  - Aeon, ILLiad and Ares
- **Server and Storage Management**
  - Decommissioning old systems
  - Strategy for the future



- **Voyager Support**
  - Automation projects
  - Preparing for next gen ILS
- **Workstation Support**
  - ServiceNow
  - Backup cost reductions
  - Expert Users program review



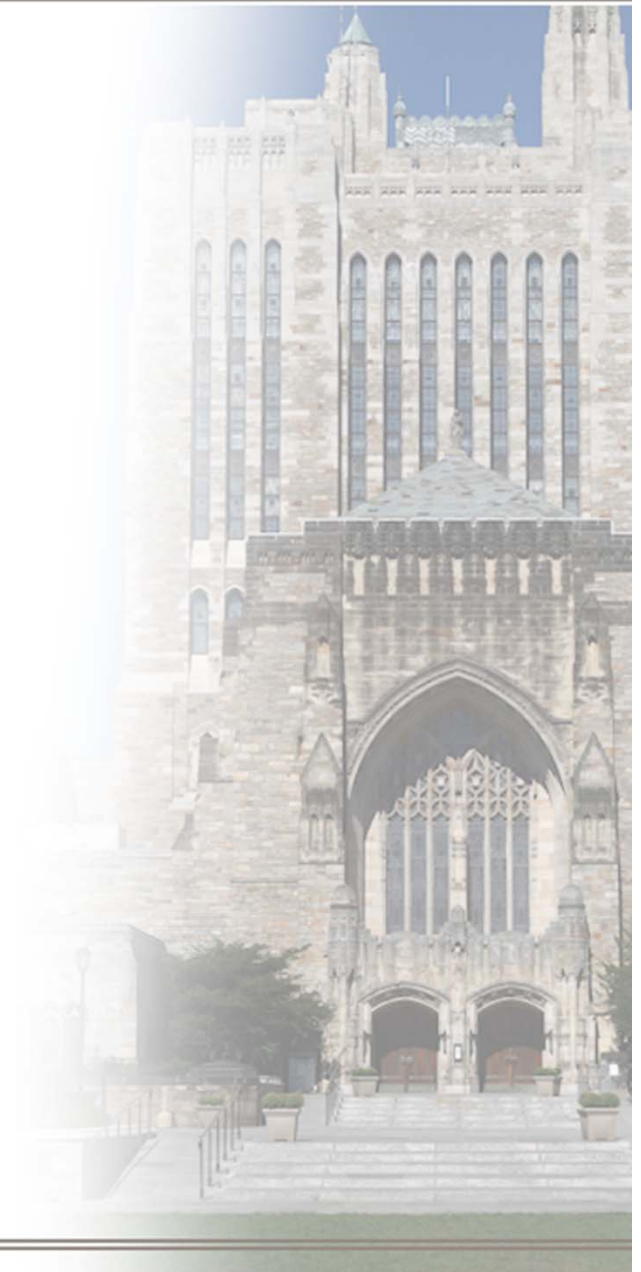
# Enterprise Systems and Infrastructure

**Ray Frohlich**

*Director, Enterprise Systems and Architecture*



- **Melissa Wisner, Manager**
- **Yue Ji, Senior Programmer Analyst**
- **Jenn Nolte, Applications Manager/Database Administrator**
- **Steelsen Smith, Library Fulfillment Systems Specialist**





## Areas of Responsibility

- Application administration, programming and integration
- Project management and coordination
- Business analysis
- Vendor management

## Supported Services

- Voyager
- Atlas Systems (Aeon, Ares, ILLiad)
- Serials Solutions Systems (Summon, 360 Suite)
- SQL Server Reporting Services
- ArchivesSpace



- **MARC Record Extract Tool**
- **Aeon migrated to Yale ITS managed and hosted infrastructure**
- **ILL web form update**
- **HATHI Trust holdings extract-completed**



## May 2014

- Aeon upgrade v3.6

## June 2014

- Illiad upgrade and migration to Yale ITS
- Serials Solutions 360 Link/MARC Updates implementation
- Serials Solutions Summon v2.0 upgrade

## July 2014

- Ares upgrade and migration to Yale ITS July 2014

## Fall 2014

- Serials Solutions 360 Counter/Resource Manager implementation
- Core web services (ATK Caches, Orbis Caches, LSF, Illiad, etc.) migration to ITS
- ILS migration prep – data cleanup group



- Greater collaboration with non-YUL IT technical staff
- Transition from ad hoc to generalizable web services
- Data and service integration (Integration CoP)



- Gail Barnett, Manager
- Steve DiSorbo, Systems Programmer
- Bob Rice, Systems Programmer



## Areas of Responsibility

- Systems administration, programming and integration

## Supported Services

- 100+ physical and virtual servers
- Storage and tape library systems



- Digital Repository infrastructure design and implementation
- Fortunoff Archive – reconciliation
- Kissinger Project – vendor data pre-import processing
- ArchivesSpace development environment
- YFAD performance tuning



## Spring 2014

- Beinecke VMware guest migration to ITS (~5 guests)
- ArchivesSpace production environment implementation

## Summer 2014

- Initial VMware guest migration from YUL IT infrastructure to ITS (~50 guests)
- Digital Repository Next Generation Storage Infrastructure implementation





- Greater collaboration with Yale ITS
- Approach new projects with “hosted first” mindset
- Unit reorganization



# Programming

**Lakeisha Robinson**

*Programmer Analyst, Digital Library &  
Programming Services*



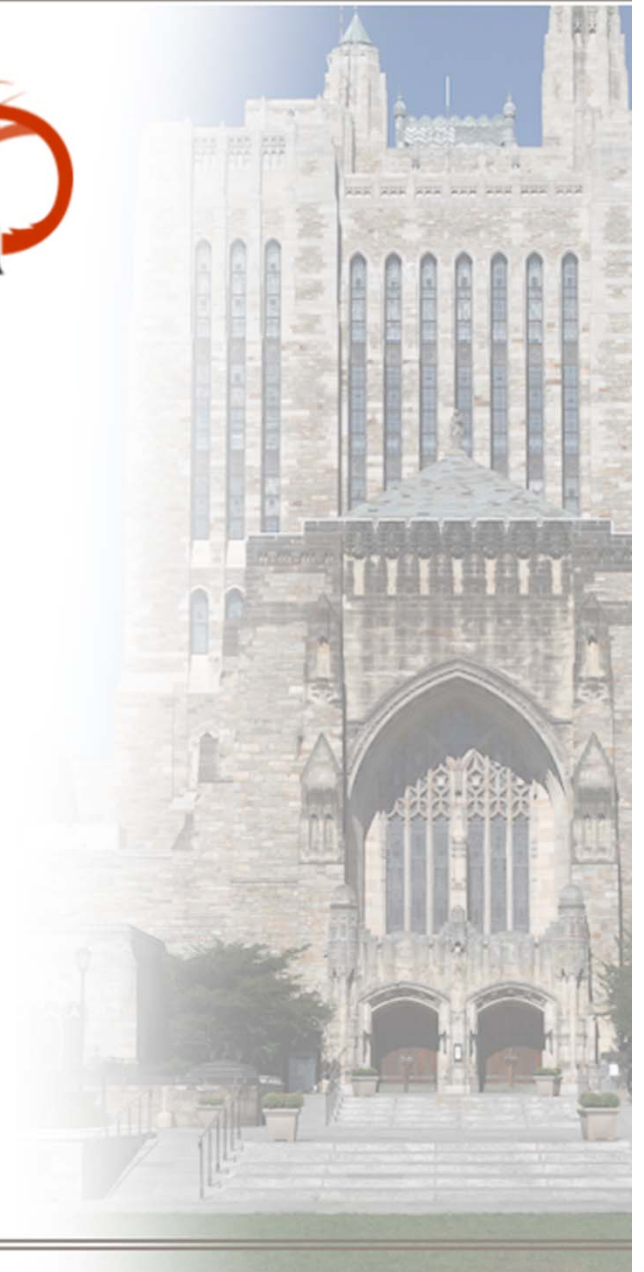
- **Mike Friscia - Manager, Digital Library & Programming Services**
- **Osman Din – Senior Programmer**
  - Source code manager
  - Source code style and design patterns
  - Ladybird 2.0 technical lead
- **Eric James – Senior Programmer**
  - Fedora Commons contributor/commmitter
  - Hydra technical lead
- **Lakeisha Robinson – Programmer Analyst**
  - Blacklight technical lead
- **Anju Meenattoor – Programmer Analyst**
  - Application support for Kissinger
  - Hydra development for Special Collections



- Open-source project
- Multi-institutional and international
- Provides a platform for digital preservation and presentation

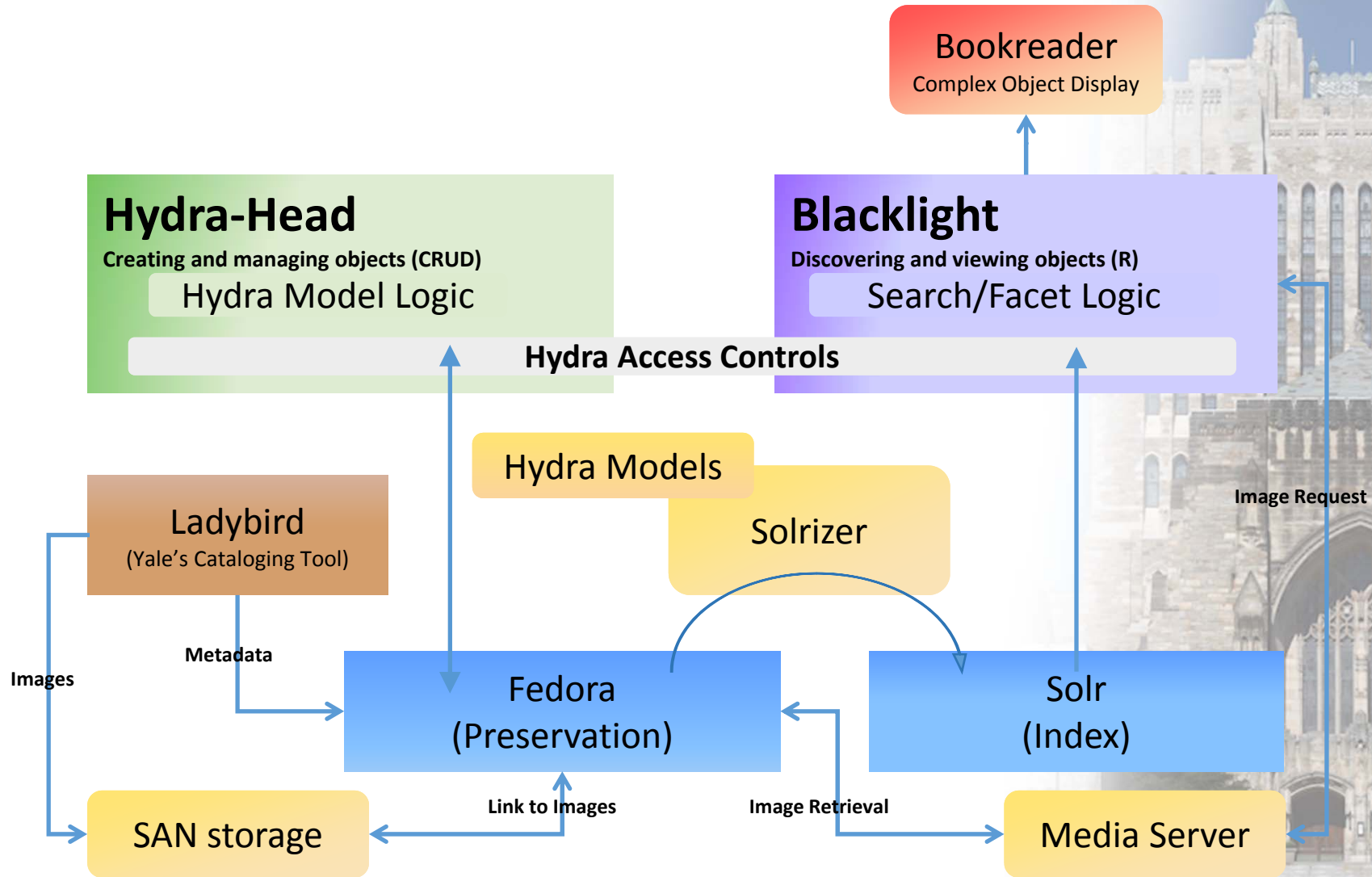


- Fedora
- Blacklight
- Ladybird
- Active Fedora
- SOLR
- Media Server
- Internet Archive Book Reader
- Ingest applications



# Overview of Yale's Hydra Stack and Workflow

Yale



- **Blacklight Staff View**
- **Authorization for restricted content access**
- **Zoom IIP/IIIF/DJTOKA**
- **DOI/Handle generation for ingested objects**
- **Blacklight Unified search**
- **Import and Ingest performance tuning**
- **File downloads from Blacklight**
- **Blacklight upgrade to version 5.x**



- Ladybird 2.0 as Hydra Head
- Hydra ingest moved to BagIT model





# Workstation & Technology Services

**Greg Blasko**

*Manager, Workstation &  
Technology Services*



## ■ Staff

- Greg Blasko, *Manager*
- Reon Keller, *IT Support Technician*
- Frederick Rodriguez, *IT Support Technician*
- Jerzy Grabowski, *IT Support Technician*  
(50% MSSA, 50% Beinecke)
- 1 part-time student worker

## ■ Contacts

- <http://web.library.yale.edu/lit/wts>
- 432-1849

## ■ Office

- Sterling Memorial Library, Room 509



## ■ Scope of Support

- Support YUL Libraries, except:
  - Beinecke, Law, Medical, Walpole
- 650+ Workstations
  - Windows 7
  - Windows XP
  - Mac OS X
  - iOS (iPad)
- Access Services, Acquisitions, Administration, Arts, Business Office, Cataloging, Classics, Collection Development, Divinity, CSSSI, HCRE, ICRS, Library IT, LSF, Maps, Music, MSSA, OHAM, Preparations, Preservation, Security, Shipping

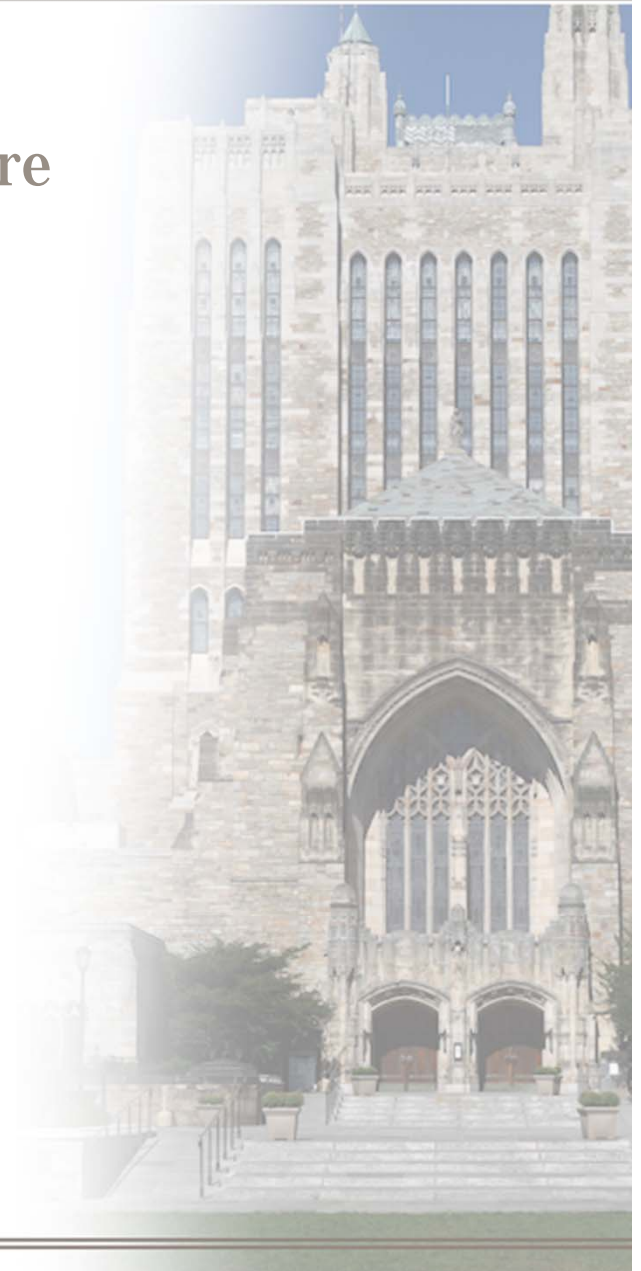


## ■ Areas of Support

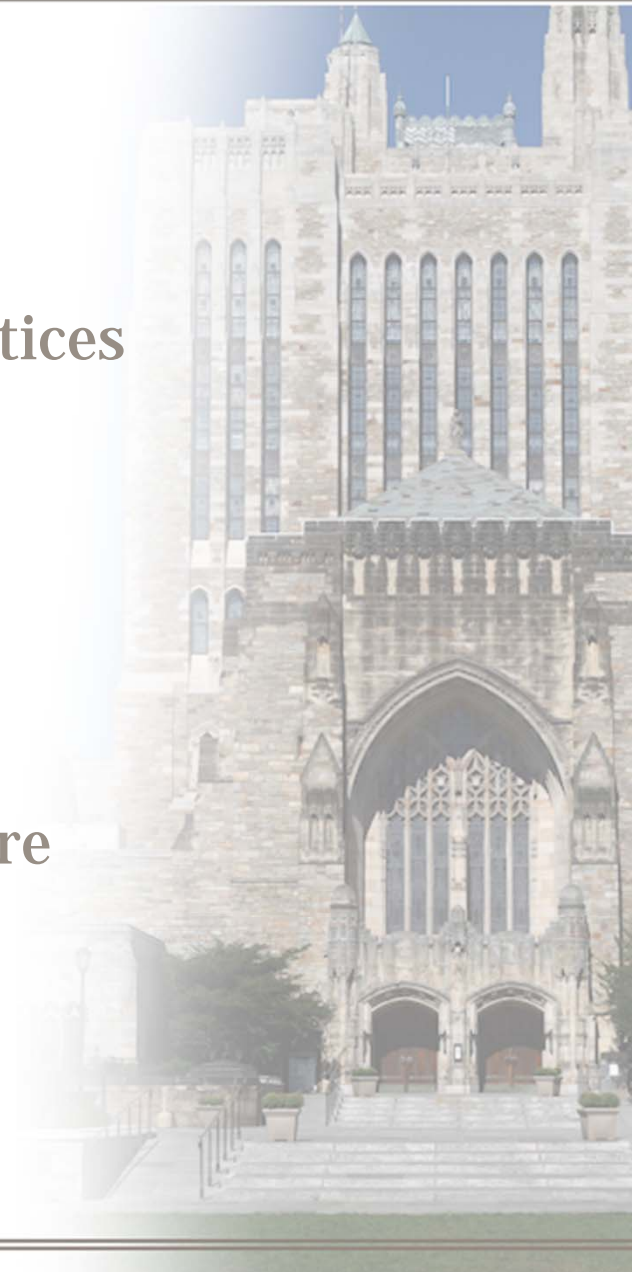
- Asset Management
  - Procurement, installation, and maintenance of staff workstations and laptops
  - Image builds and application deployment
  - Active Directory and Group Policy management
  - Network access and security
- Workstation Support
  - Function as primary point of contact for resolving incidents, service requests, and other IT support issues throughout the Library system
- Consultation and Collaboration
  - Technical consultation for Library staff
  - Collaborate with other units within Library IT and ITS to provide new system services and enhancements to Library staff



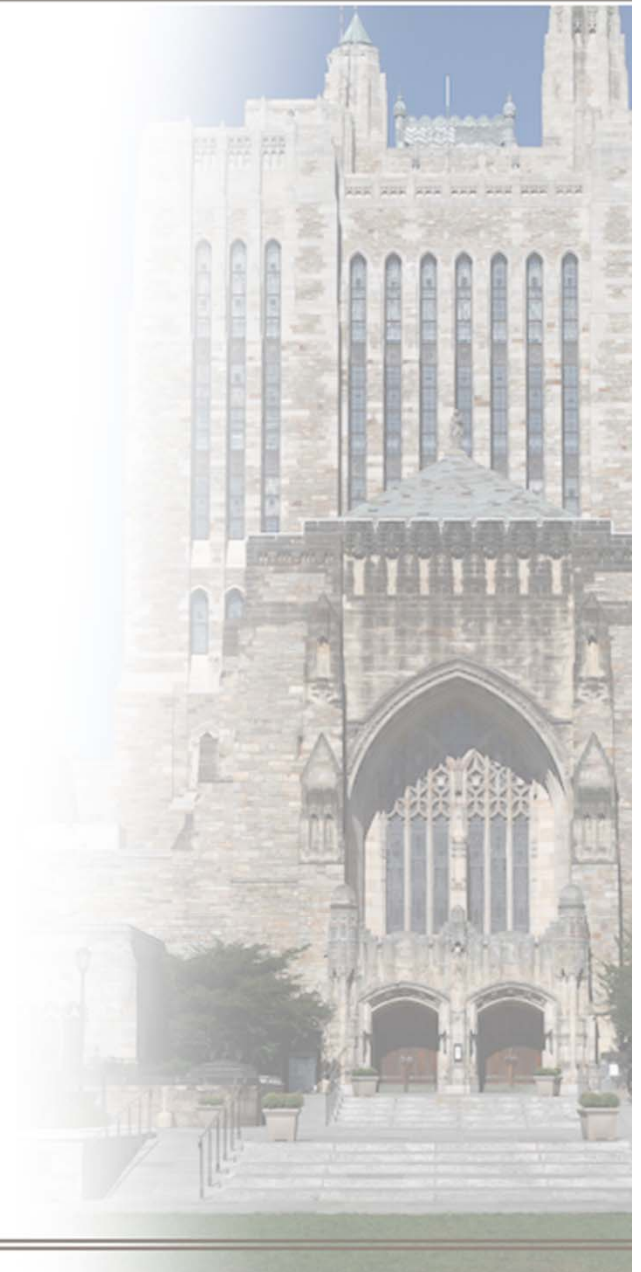
- **ServiceNow**
  - IT service management (ITSM) software
  
- **Workstation Backup**
  - TSM Overages
  
- **Other Initiatives**
  - Expert User Program Evaluation
  - Website Content
    - Staff Workstation Policy
    - Supported Software Matrices
  - SharePoint 2013



- **ITIL (Information Technology Infrastructure Library)**
  - Framework of standards and best practices leading to the implementation and management of quality information technology services
- **ServiceNow**
  - IT service management (ITSM) software based on ITIL standards
  - Incident and service request tracking system for ITS and Library IT



- **Library IT needed a ticketing system**
- **Adopt IT service management (ITSM) strategy**
- **ServiceNow provides interoperability with ITS**



- **Incident and Service Request forms on Library IT Web site**
  - CAS logon required
  - Tickets assigned to W&TS
- **W&TS will triage tickets:**
  - Expert Users (Tier I)
  - W&TS Technicians (Tier II+)
  - Other Library IT groups
  - ITS Service Desk





Firefox

Workstation and Technology Services | Y...

web.library.yale.edu/lit/wts

Yale University Library

Your Library Account  
Ask Yale Library  
Reserve Rooms  
Places to Study

RESEARCH SERVICES LIBRARIES & COLLECTIONS INFORMATION & POLICIES

Library Information Technology

HELP AND CONTACTS

Michael Dula  
Chief Technology Officer  
203-432-1371

Julie Niemeyer  
Sr. Administrative Assistant  
203-432-7850

Report a Problem  
Service Request

Library IT help desk: 432-1849

Staff Directory  
Organization Chart

GENERAL INFORMATION

Workstation and Technology Services

Contact Us - Please use one of the buttons below to contact Workstation and Technology Services (CAS login required):

Report a Problem Service Request

ABOUT WORKSTATION AND TECHNOLOGY SERVICES (W&TS)

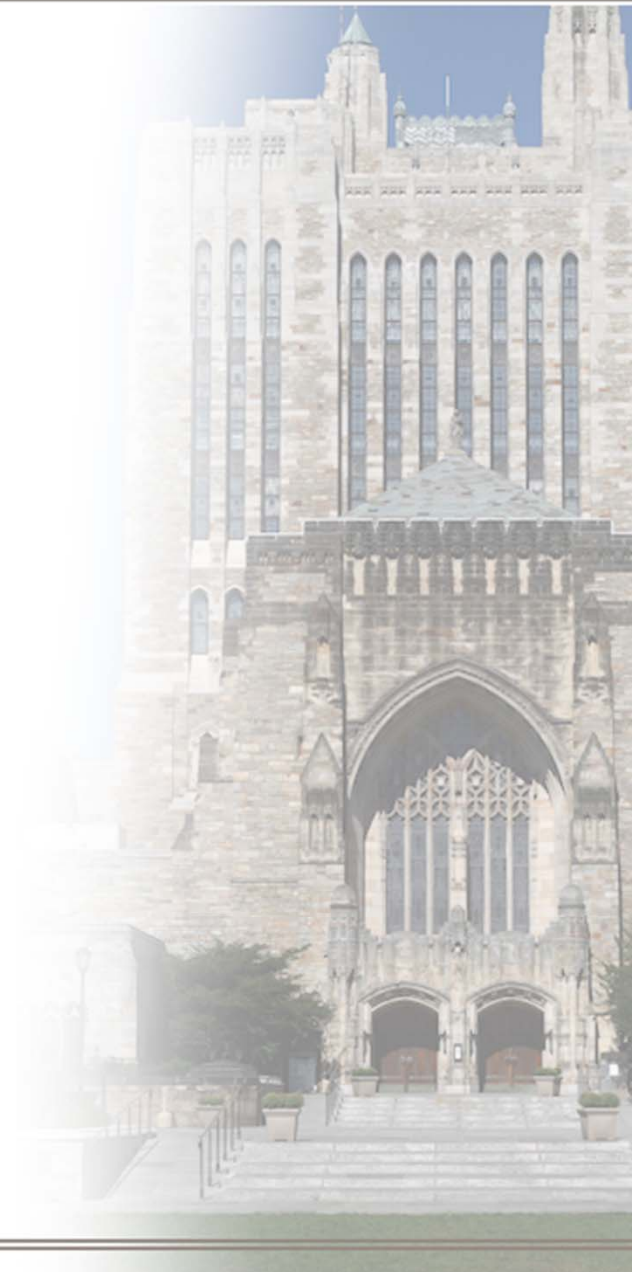
The Workstation and Technology Services (W&TS) unit of the the Yale University Library IT department is responsible for the lifecycle of the Library's networked staff computing infrastructure including over 800 workstations and laptops supporting over 550 Library staff. W&TS functions in these areas:

Asset Management - We oversee the entire staff workstation lifecycle through:

- Procurement, installation, and maintenance of staff workstations and laptops
- Image builds and application deployment for standard functionality and productivity

- Workstations
  - \$45,582
- Servers
  - \$10,276

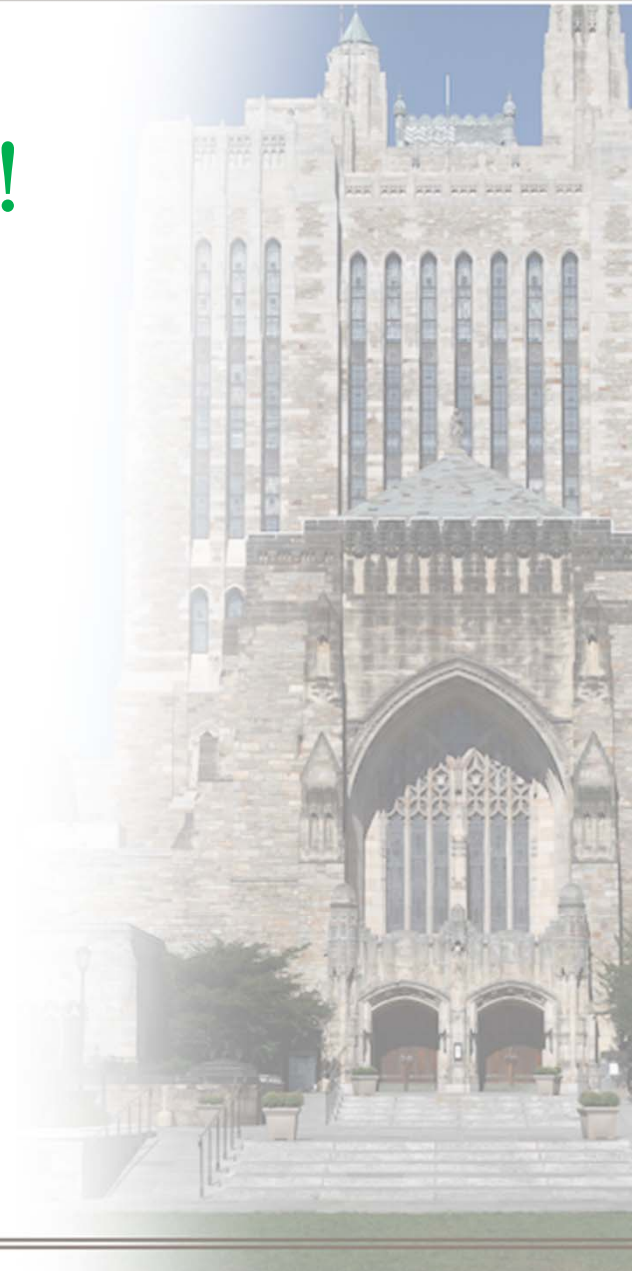
**6 Month Total: \$55,858!**



- **Tivoli Storage Manager**
  - Overage charges for backups >100 GB
  - Backs up all local data by default
  - External hard drives, Drobo/RAID systems
  - Retains file spaces
  - Result: bloated backups/high overage charges
- **Some server backups deemed obsolete**
- **Identified workstations with largest overages**
  - 11 systems: overages of 1-4+ TB
  - 27 systems: overages of 100 GB – 1 TB
- **Worked with staff to minimize backups**



**Monthly Savings: \$5,600!**



- **Expert User Program Evaluation**
- **Windows XP Upgrades**
  - Microsoft ceased support on April 8
- **Email Migrations to YaleConnect**
- **A/V Enhancement**
  - Lecture Hall / Lecture Capture
- **Network Upgrades in SML**
- **Website Content**
  - Staff Workstation Policy
  - Supported Software Matrices
- **SharePoint 2013**



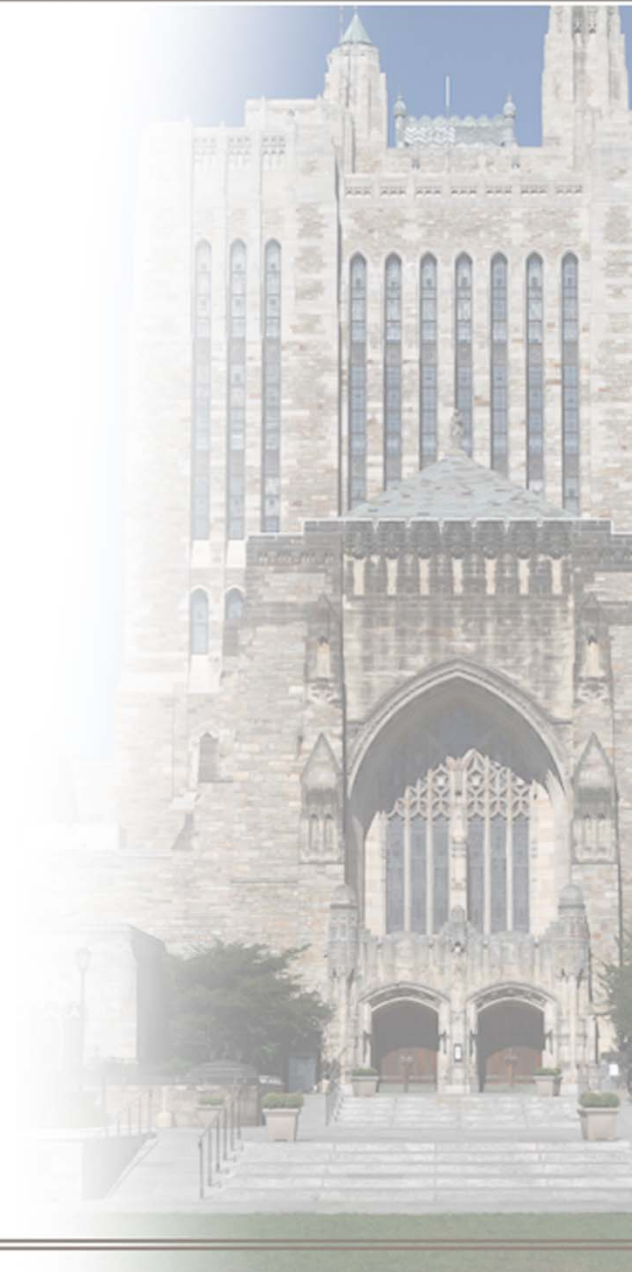
# User Experience Projects

**Katie Bauer**

*User Experience Librarian*



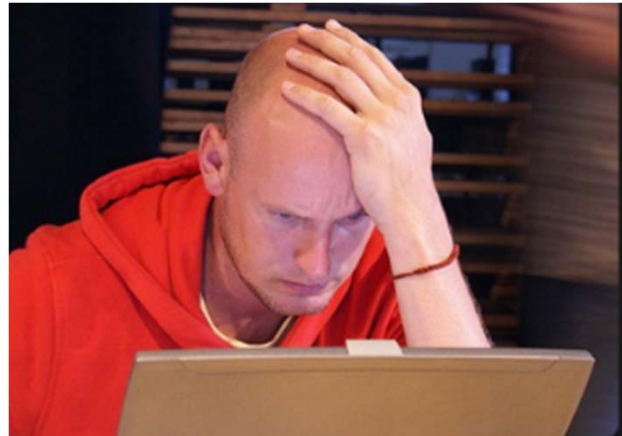
- Kalee Sprague, Systems Librarian
- Andrew Predmore, Web Operations Manager
- Meng Tang, CIS Support Specialist



Collections

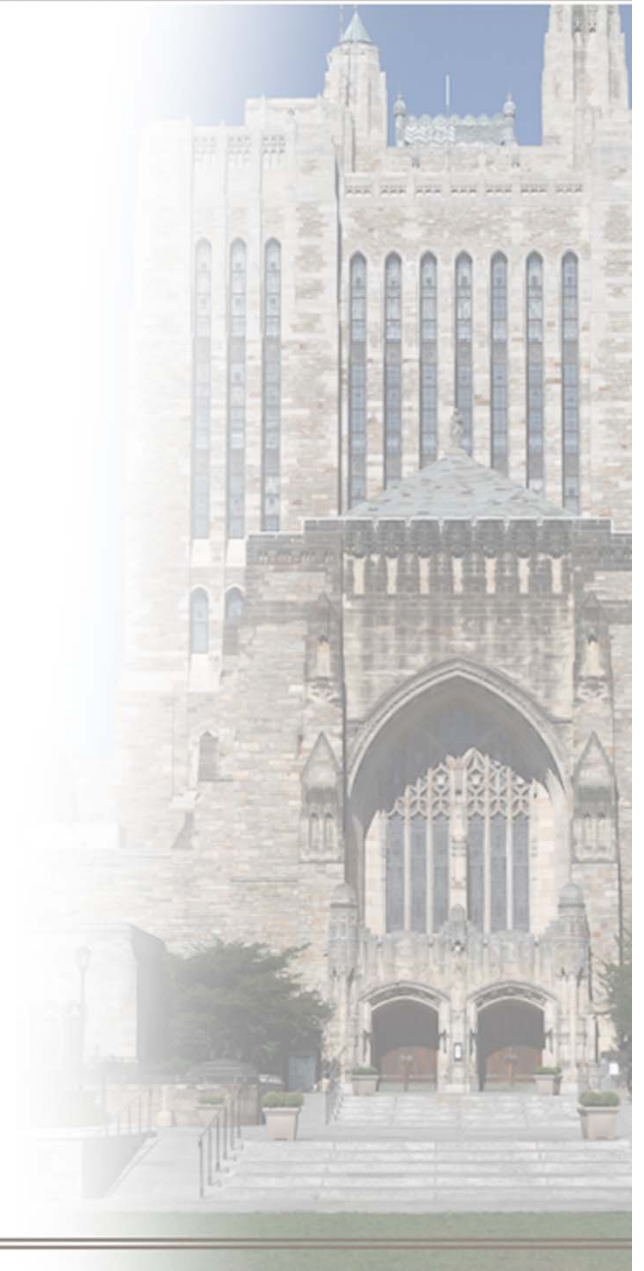
Services and Staff

Web Interfaces





- **Libguides into Classes V2**
- **YUL Website**
- **Universal Search**



## Yale UNIVERSITY LIBRARY

Japan Studies Tags: asian studies, east asian studies, english, japan, japan studies, japanese studies kathleen.bauer@yale.edu « Guide Admin « Dashboard « Sign Out

Home Find Books, Articles, Videos and more.. Reference Subjects English Resources Japanese Special Collections at Yale  
Individual Course Guide ILL requests Citation Guide Major Databases at a Glance

Home Print Page Search:  This Guide

### Quick links

This page provides some effective ways to identify resources in Japan studies. The pages under the links below provide examples and guidance on strategies to find:

**Find Books, Articles, Videos and more...**


- Books
- Journals
- Newspapers
- Gov. Doc.
- Visual Materials

**Reference**


- Dictionaries & Encyclopedias
- Bibliographies
- Names and Biographies
- Statistics
- Maps and Place names
- Translations

### Welcome!


#### About this Guide



### Contact



Haruko Nakamura



**Contact Info**  
Phone: (203) 432-1792  
[Send Email](#)

**Links:**  
[Website / Blog Profile & Guides](#)

## Content Drilldown

Sep 1, 2013 - Dec 31, 2013  
Compare to: Sep 1, 2012 - Dec 31, 2012

Customize Email Export Add to Dashboard Shortcut

All Visits  
+0.00%

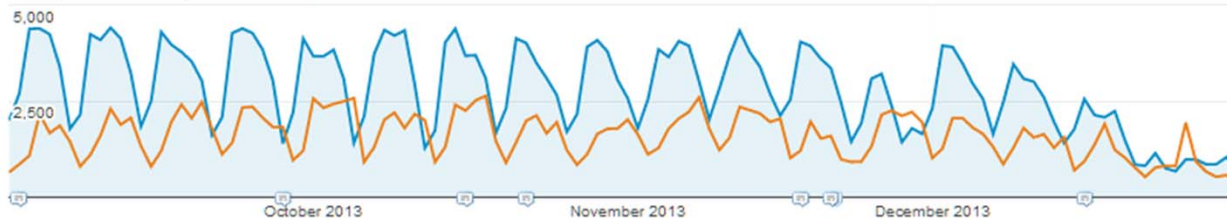
### Explorer

Pageviews VS. Select a metric

Day Week Month

Sep 1, 2013 - Dec 31, 2013: Pageviews

Sep 1, 2012 - Dec 31, 2012: Pageviews



Primary Dimension: Page path level 1 Page

Secondary dimension Sort Type: Default

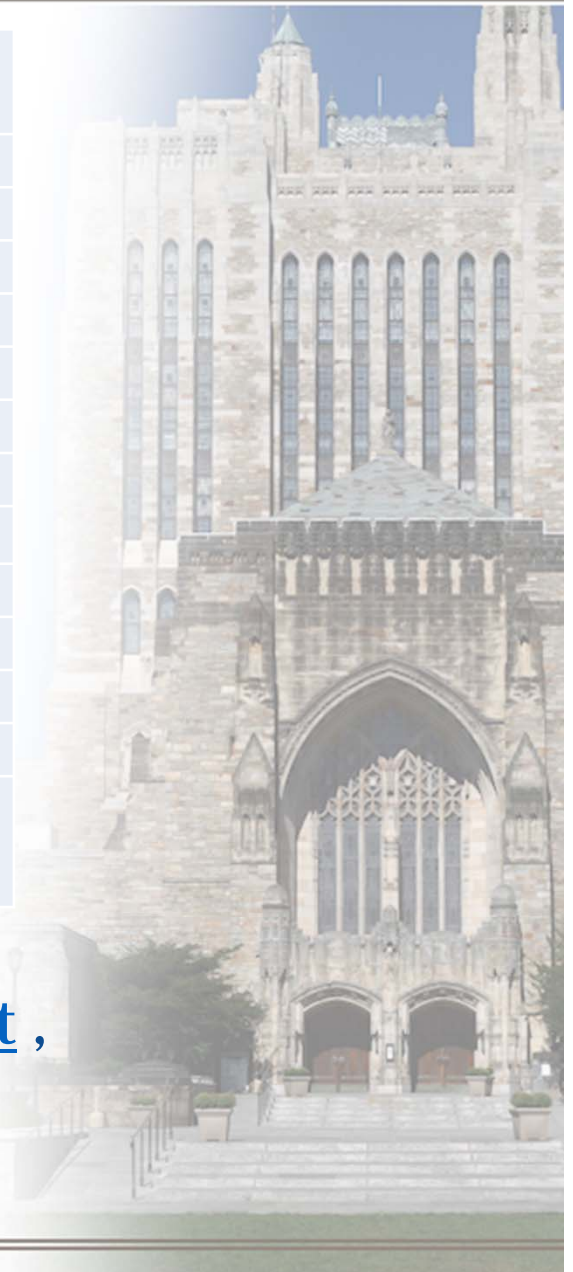
guides advanced

Page path level 1	Pageviews	Unique Pageviews	Avg. Time on Page	Bounce Rate	% Exit
	<b>77.84%</b> <span style="color: green;">▲</span> 346,178 vs 194,653	<b>82.22%</b> <span style="color: green;">▲</span> 275,844 vs 151,381	<b>12.75%</b> <span style="color: green;">▲</span> 00:01:33 vs 00:01:22	<b>6.73%</b> <span style="color: green;">▲</span> 58.33% vs 62.54%	<b>8.66%</b> <span style="color: red;">▼</span> 34.47% vs 37.74%
1. <a href="#">guides.library.yale.edu/</a>					
Sep 1, 2013 - Dec 31, 2013	346,152 (99.99%)	275,818 (99.99%)	00:01:33	58.32%	34.47%
Sep 1, 2012 - Dec 31, 2012	194,653 (100.00%)	151,381 (100.00%)	00:01:22	62.54%	37.74%
% Change	<b>77.83%</b>	<b>82.20%</b>	<b>12.75%</b>	<b>-6.74%</b>	<b>-8.67%</b>

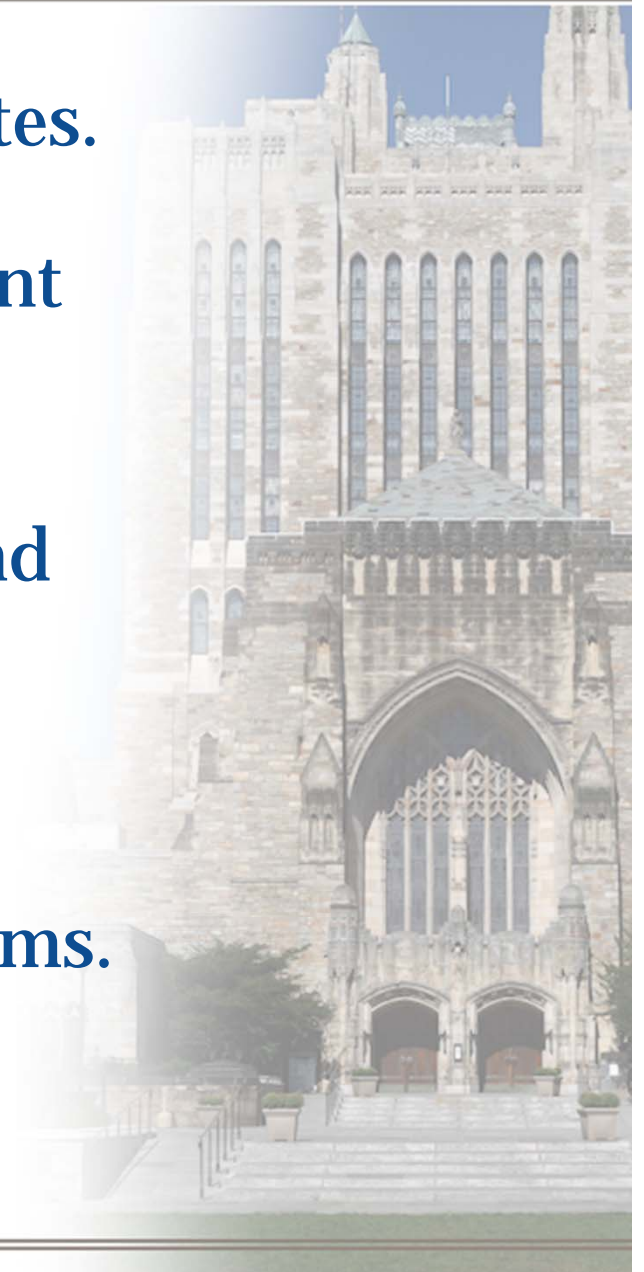


<u>Classes*v2 Subject</u>	<u>Classes V2 Abbreviation</u>	<u>Library's Subject List</u>
Architecture	ARCH	Architecture
History of Art	HSAR	Art & History of Art
Film Studies	FILM	Film Studies
School of Music	MUS	Music
Drama	DRAM	Theater Studies
Theater Studies	THST	Theater Studies
History	HIST	History
Genetics	GENE	Biology
Classical Civilization	CLCV	Classics
Latin	LATN	Classics
Renaissance Studies	RNST	Classics
Comparative Literature	CPLT	Comparative Literature
Ethics, Politics, and Economics	EP&E	Political Science,

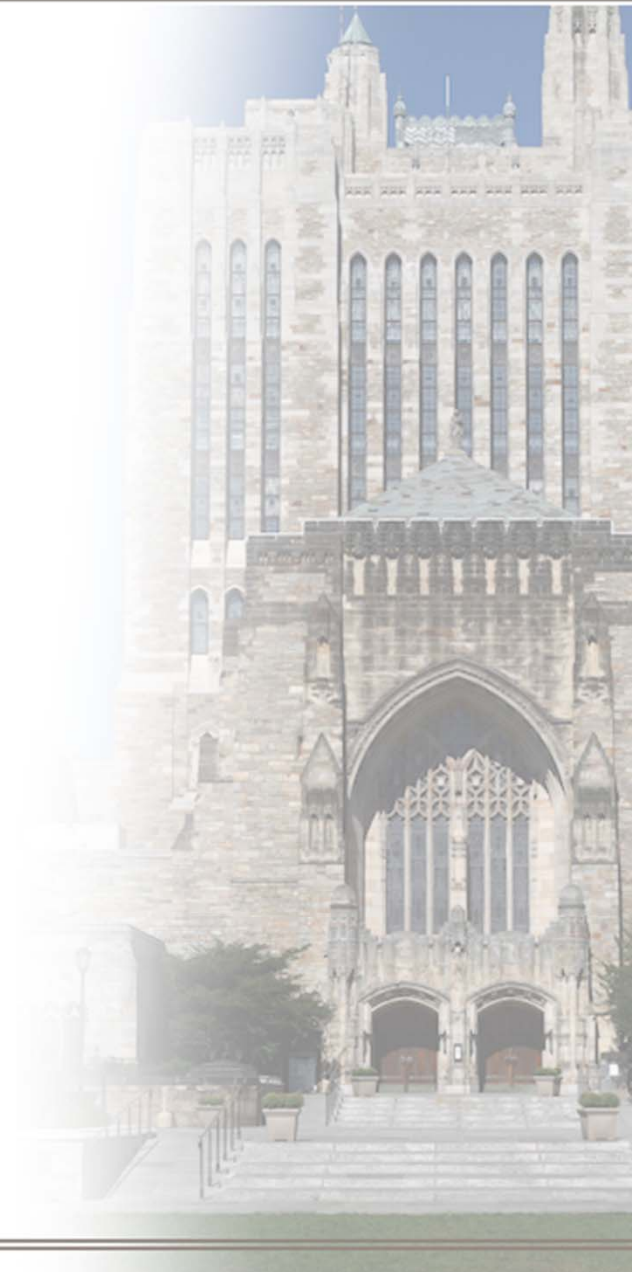
- [Link to a specific guide, guides in one subject , guides in multiple subjects](#)



- Moving content to central ITS YaleSites. ITS supports the server & provides training. We benefit from development work done elsewhere in Yale.
- Completed: Arts, MSSA, Divinity, International Programs, Buildings and Places have migrated to YaleSites.  
**75% of Use**
- Major content to move in Summer: Personal Librarians, Music, Microforms.  
**Additional 10% of Use**



- **Summon 2.0**
- **Blacklight Integrated Search**
  - Summon
  - Orbis and Morris
  - Hydra (digitized content)
  - Website





Clear Filters

## REFINE YOUR SEARCH

Any

Full Text Online  
Peer-Review

## CONTENT TYPE

Any

Journal Article  
Magazine Article  
Book / eBook  
Book Review  
Conference Proce...  
More...

## DISCIPLINE

Any  
architecture  
engineering  
computer science  
history & archae...  
medicine  
More...

## PUBLICATION DATE

1,215,544 results sorted by [relevance](#)

Add results beyond your library's collection

 Database Recommendations

[ARTbibliographies Modern](#) - ARTbibliographies Modern (ABM) provides full abstracts of journal articles, books, essays, exhibition catalogs, PhD dissertations, and exhibition reviews on all forms of modern and contemporary art.

[ARTstor](#) - Digital library of more than one million images in the arts, architecture, humanities, and social sciences



## Architecture

1922

Journal: [Citation Online](#)

online



## Architecture

Arkansas Business, 01/2014, Volume 31, Issue 4

...Ryan Biles has been promoted to firm associate at SCM Architects PLLC in Little Rock. A graduate of the Fay Jones School of **Architecture** at the University...

Journal Article: [Full Text Online](#)

online



## Architecture

Arkansas Business, 11/2013, Volume 30, Issue 46

Journal Article: [Full Text Online](#)

## architecture

From Credo Reference

Art of designing structures. The term covers the design of the visual appearance of structures; their internal arrangements of space; selection of external and internal building materials; design or selection of natural and artificial lighting systems, as well as mechanical, electrical, and plumbing systems; and design or selection of decorations and furnishings. Architectural style may emerge from evolution of techniques and styles particular to a culture in a given time period with or without identifiable individuals as architects, or may be attributed to specific individuals or groups of architects working together on a project.

[Read more](#)

## Suggested Librarian



Holly Hatheway, Art & Architecture Librarian  
<mailto:holly.hatheway@yale.edu>  
203-436-8052

## Related Topics

[Modern architecture](#)  
[Performative architecture](#)  
[Digital architecture](#)

## Recommended Research Guides

[Home - Architecture Research - Yale University Library Subject Guides at Yale University Library](#)

by Holly Hatheway, Lindsay King, Lyndsay Bratton

Yale University Library

My Library Account Help

baseball Search

Quicksearch

- Catalogs
- Articles
- E-Journal Titles
- Databases
- Academic Commons
- Libraries Website
- Archives
- Dissertations
- E-Books
- New Arrivals
- Newspapers

Catalogs All 8 results

Records of the Department of Athletics, Yale University, documenting baseball

Author Yale University. Dept. of Athletics  
Format Manuscript/Archive

Motion pictures of the Department of Athletics, Yale University, documenting baseball

Author Yale University. Dept. of Athletics  
Format Manuscript/Archive

The kid: the immortal life of Ted Williams

Author Bradlee, Ben  
Format Book

Yale athletics photographs

Format Manuscript/Archive

Photograph albums of Walter Freeman, Class of 1916, Yale College, documenting life at Yale

Author Freeman, Walter, 1895-1972  
Format Manuscript/Archive

Hubert Merrill Sedgwick papers

Author Sedgwick, Hubert M. (Hubert Merrill), 1867-1950  
Format Manuscript/Archive

Articles All 10,707,679 results

Baseball

Author Rader, Benjamin G  
Citation 2008  
Format Book

baseball

Citation Britannica School, 1/14/2014  
Format Reference

Baseball

Author Levinthal, David  
Citation 2006  
Format Book

Libraries Website All 104 results

Baseball Books for Children From the Betsy Beinecke Shirley ...

... Monday, July 1, 1996 to Friday, August 30, 1996. Baseball Books for Children From the Betsy Beinecke Shirley Collection. ...

baseball | Beinecke Rare Book & Manuscript Library

... Navigation. baseball. . . . . Playing Dirty. Selected images from a collection of

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The kid - Yale localhost - development - Mozilla Firefox

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search-test.library.yale.edu/catalog/10574241?counter=3

yale library staff directory

The kid - Yale localhost - development

# Yale University Library

My Library Account Help

## CATALOGS

Orbis/Morris All Fields Search Advanced Search

Print Email Send to Phone Save to Bookbag Export Display In Services

### The kid

Author [Bradlee, Ben.](#)

Title The kid : the immortal life of Ted Williams / Ben Bradlee, Jr.

Edition First edition.

Published New York : Little, Brown, and Company, 2013.

Description viii, 855 pages : illustrations ; 25 cm

Subjects [Williams, Ted, 1918-2002.](#)  
[Baseball players](#) > [United States](#) > [Biography.](#)

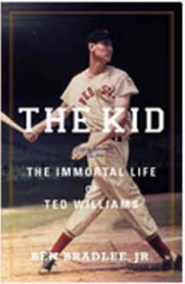
Contents

- Shame
- "Fairyland"
- Sarasota and Minneapolis
- Big time
- The writers
- .406
- 3A
- World War II
- 1946
- 1947-1948
- 1949-1951
- Ted and Joe
- Korea
- Transitions
- 1954-1956
- Late innings
- Last ups

**Available from:**

SML, Map Collection, Room 707 (Non-Circulating)  
 39 Z19 1943  
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Google Books  
[More info at Google books](#)



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# Wrap-up

**Michael Dula**  
*CTO*



- **EliScholar**
- **Project Management**
- **LIT Website**
- **Community Participation  
and Collaboration**

