

Engineering the Stacks

Georgia Tech Library's Drupal 8 Transformation







Georgia
Tech  Library

Heather Jeffcoat

Web & Discovery Management
Librarian

 /in/heatherjeffcoat

 @heatherjeffcoat



About Georgia Tech Library


Primarily a **digital -first** organization, averaging more than **four million downloads/year** from more than **35,000 databases** covering virtually every conceivable topic of scholarship.


One brick & mortar library . The majority of our physical collection housed in cold storage at the **Library Service Center** in partnership with Emory University. [iversity](#)



Justin Rent

UI/UX Designer

 /in/jrentdesign

 @iamrentman



About Mediacurrent

Mediacurrent is a **full-service digital agency** that implements world class **open source software development, strategy and design** to achieve defined goals for **enterprise organizations seeking a better return on investment** .



Today's Agenda

I. Project Overview & Timeline

II. Requirements

III. Personas & Use Cases

IV. Design Details

V. Demo

VI. Q&A



Project Overview

Service Design, Technology Design,
Implementation



1

Service & Technology Design

September 2016 - October 2017

Met with stakeholders
Determined requirements
Evaluated frameworks

3

Design & Development

May 2018 - January 2019

Engaged with Mediacurrent
Received Drupal 8 Training
In-house page build -out

4

Launch!

January 10, 2019

7 months from
engagement to launch!

2

RFP, Proposals, Procurement

November 2017 - May 2018

Consulted with Institute Communications & Procurement
6 proposals received





Establishing Requirements

Requirements	Priority	Long or Short Term?	Archives	Public Services	Subject Librarians	Dean	Grad	Undergrad	Faculty	ITD	Institute Communications
GT Branding	Critical	Short	X							X	X
Updated content	Critical	Short	X	X	X	X					
Responsive/Mobile friendly	Critical	Short			X		X			X	X
Meets Accessibility guidelines	Critical	Short					X			X	X
Easy, user-friendly navigation, less clicks	High	Short	X	X	X	X	X	X	X	X	
Clean & simple home page, less text, less links	High	Short	X	X	X	X	X	X	X	X	
Quick access to catalog, finding aids, digital archives, databases, libguides, Architecture & Archives	High	Short	X	X	X	X	X	X	X		
Events calendar on home page	High										
Gadget requests on home page	High	Short		X	X	X	X	X	X		
Clearly defined paths for user groups	High	Short		X	X		X	X	X		
Easy access to campus resources	High	Short		X			X	X	X		
Help & contact information more visible on home page	High	Short			X	X	X	X			
Clearer search box (what they are searching)	High	Short			X	X	X	X	X		
Updated look	High	Short			X	X	X	X	X	X	X
News, events, communication on home page	High	Short	X	X	X	X	X	X	X	X	
Visibility of services	High	Short				X	X	X	X		
Easier access to eBooks	High	Short					X				
Provide tools for users	High	Long			X		X	X	X		
Immediate access to experts/Library staff	High	Long				X	X	X			
Improve availability info and request process	High	Out of Scope					X		X		
More graphics or visual cues	Low	Short		X							
Architecture Library link on home page	Low	Short		X							
Should represent a technology institution	Low	Short			X						
Showcase library experts/staff	Low	Short			X	X					
Mouse-over menus	Low	Short			X			X			
Easier access to newspapers	Low	Short					X				
Improved authentication, log-in process	Low	Long					X		X		
Video tutorials	Low	Long	X		X						
FAQ page	Low	Long		X							
Terminology challenges	Low	Long			X						
Internal version for staff	Low	Long			X	X	X	X	X		
Options for collaboration	Low	Long			X						



Persona Research & Use Case Development



Novice Seeker

PhD student in BME

Behaviors

Locates & recommends articles from both Tech and Emory e-journals

Searches PubMed and Google Scholar mainly

"When you're just an average user the library system can be confusing"

Posts on Reddit, blogs and other online help venues for expertise. E-mails or calls subject librarians as one point of contact if peer and self help fail

Activity on site

Finds primary sources (pictures from the archives, manuscript - original item); uses advanced search

Finds journal articles by typing in citations that she has pulled from other articles' footnotes

Finds out who the subject specialist librarian is in his field and asks her in online chat for appointment to discuss access to an archive

Find the most current articles on a given topic, or for a specific citation

Pain Points

Librarians are very accessible although he wishes there was more integration between his department and the libraries in terms of resources

Finds that Google Scholar is great in terms of targeting searches, particularly when he does not have the full citation. He generally pairs this with a search of the online catalog

Occasionally uses Wikipedia and other popular websites for brief but unreliable descriptions of sources



Undergrad Chad

Sophomore by credit hours

Behaviors

Does not use the physical collection in the library at all and estimates that he has asked a librarian for advice only once in two years

Has not fully explored the library website in terms of functionality and is sometimes not sure what services are Georgia Tech Library services and what services are outside of the university

"It's just not worth the hassle to keep searching for the original article"

Activity on site

Looks for practical information about the library

Looks for books on reserve for his class, but he can not remember the instructors name and is not sure about how it is spelled

Searches for newspaper articles from his home town

Looks for a quick half page overview of a topic that that is mentioned in his textbook

Searches to find 10 or 20 references on a topic for a 10-page paper assigned in a Humanities course

Looks for the Subject Specialist Page for his humanities course

Pain Points

Tends to use Google for beginning searches and when he does not know too much about the topic. If he has more information and knows more, he will go directly to the more directed "search engines" on the library web site

Does not have enough time to use Inter Library Loan to get material. He is typically working at the last minute and if he can't access the information online, he will look for another resource

If the article he is looking for is not available in full text online, he will look for another article



Futurist Inventor

Associate Professor in School of Interactive Computing

Behaviors

Supplements primary field research with online searches that include text books, government codes and regulations, and documentation produced by various professional associations

Uses scholarly journals "as a check" area of study

Relies on online access mechanisms such as SLA database, Google, and Google Scholar

"I want access to journals, books, videos, data, code, social media, etc., on any device."

Activity on site

Suggest book orders

Communicate with librarian about important new materials coming out in their field

Request materials Georgia Tech doesn't own

Oversee the teaching assistants as they set up course reserves

Read latest issue of important journals in his field.

Follow link to Hiwire Press to see about a journal for which he is on the board

Pain Points

Lost access to published sources when there is a gap between subscriptions

Not all materials show up in the online databases

Finds it frustrating when he can get only abstracts of journal articles and the full text is not available

Not always evident from the search results whether the journal exists as full text online

The Library NEXT – USE CASE SCENARIOS

Service Name: Library Website

Service Manager: Heather Jeffcoat

USE CASE #1

Use Case Name	Graduate student navigating the Library website using a mobile device (phone and/or tablet)
Description	A graduate student is out of town and does not have access to a computer, but needs to take care of several Library tasks while away, but she only has access to her cell phone.
Actor(s)	Graduate student
Actions/Event Steps:	<p>A graduate student receives a call about a family emergency and has to abruptly leave campus. On her way to her destination she realizes, she has 2 time critical tasks she must take care of,</p> <ol style="list-style-type: none"> 1. She needs to reserve a space in Clough Commons for the professor she assists. 2. She needs to renew an overdue book. She also needs to check the date of a patents workshop she is planning to attend to make sure she will be back on campus in time. <p>The student pulls out her cell phone, opens the web browser and searches, GT Library. The first result is the GT Library's website. She clicks the link and is taken to www.library.gatech.edu. The student is given visual cues that she is in the right place with familiar GT branding, colors and the presence of the Library logo. First, she tackles the room reservation. She clicks on the menu button that appears at the top of the page. She scans the menu and quickly notices several top level links with related icons. Below the top level links she sees the Library's main navigation. She recognizes the main navigation sections from using the Library website on her laptop, she knows she can find the Reserve a Room link in one of these sections, but when she glances back up at that top level links she sees a clear Reserve a Room link with a calendar icon, she clicks the link. This takes her to a page with photos of the different types of rooms available for reservation. The photos have easy to read labels overlaid on top (Breakout, Presentation Rehearsal, Classrooms & Auditoriums, Event Spaces). Her professor has asked her to reserve a small classroom for a grant meeting he will be hosting with 4 fellow faculty members. The student clicks on the image labeled Classrooms and Auditoriums. On this page she's presented with a filter at the top of the page labeled: Capacity. Below the filter she sees photos of the rooms available. She quickly scrolls down the page scanning what's available, but there are lots of options, so she returns to the top of the page by double clicking at the top of the screen. She needs a room that can accommodate 5 people, so she selects the Capacity option of less than 12. This updates the photos below showing only the rooms that accommodate less than 12, returning 5 results. Each photo has the room #/name overlaid on top and a clear Details button and Request Now! button. She clicks the Details button for the first room, and a pop-up appears, displaying the following information:</p> <p>Capacity = 12 Technology = 1 Flat Panel Display, Laptop Connection</p> <p>She clicks the X located in the upper right corner of the pop-up box and the box disappears returning her to the results page. She does the same with the other 4 results before deciding to go with the first room. She clicks the Request Now! button. This takes her to GT Events Reservations System where she is able to reserve the classroom for her professor.</p>

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The Library NEXT – USE CASE SCENARIOS

Service Name: Library Website

Service Manager: Heather Jeffcoat

USE CASE #2

Use Case Name	Subject librarian updating content on the website
Description	A subject librarian is putting together a library orientation session for a new cohort of Engineering graduate students from one of the schools she is liaison to. She wants to update the information on her Librarian page because she has new office hours. She wants to tell the students about the graduate student advisory board but needs to update that board's page with a recent picture of the board.
Actor(s)	Subject librarian
Actions/Event Steps:	<p>The subject librarian uses a web browser to navigate to the Library website. She uses the site search to search for her name and finds her Librarian page in the first page of search results. She clicks on the result to view the page.</p> <p>She uses a login link which is on every page of the website, and she logs into the site with her GT credentials. Because her GT login is linked to her editing permissions in the Library website's content management system, this results in the page becoming editable.</p> <p>She adds a new line to the page and types in her office hours. While she is on the page, she decides to run a spell check, which finds a typo that she can easily correct. She saves the page content. Then she gets curious and wonders if anyone has visited her page recently, so she clicks a link to analytics which displays statistics on recent visits.</p> <p>She navigates back to the home page and follows the link to information for graduate students. Here she finds a link to the graduate student advisory board. Because she has permission to edit this page and is already logged in, this page appears editable. She uses the content management system tools to upload a JPEG image of a photograph. She previews the page to check the positioning of the image, then returns to the editable page to center the image. She then remembers that she needs to edit something in her research guide and clicks the link back to the library home page. A message appears asking her if she wants to save her changes before navigating away from this page, which she does. The page redispays with the image centered on the page.</p>
Preconditions	The subject librarian knows that all librarians have their own Librarian page on the website, and that all of the pages in the website are indexed in a site search. She has received training on the basic tools of the content management system. Site administrators have configured permissions in the content management system so that individual pages may be edited by certain people. The content management system provides page-level usage statistics.
Post-conditions	The librarian is satisfied that she can make simple edits to pages she has created or is the SME for, without having to wait for a web manager to make changes.
Success Indicator(s):	The librarian is able to use content management system tools to add, delete and edit content on pages that she has permission to edit.

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Design



My Accounts Contact Us Feedback



SEARCH

GO!

I need...

RESEARCH TOOLS

- Library Catalog
- Find Databases
- eJournals
- Course Reserves
- Research Guides
- Library Classes
- more...

SERVICES

- Computers & Printing
- Borrow
- Renew Books
- Interlibrary Loan
- Reserve a Room
- Subject Librarians
- more...

ABOUT US

- Hours
- Directions & Maps
- Staff Directory
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- Visitors
- Jobs
- more...



NEWS & EVENTS

JAN 29 **Patent Tuesdays**

Are you an inventor, an entrepreneur, a student or a researcher who is getting ready to apply for a patent or someone who is curious about patents? In this class, you will learn the patent basics as well as patent search strategies through hands-on exercises.

f t i y

[Library Calendar](#) | [Library Blog](#)

JAN 10 **Open 24 Hours**

[View Library Hours](#)
[Class & Event Schedule](#)

FACULTY QUICKLINKS:

Select...

ADVANCED TOOLS:

Select...

Flipster





[GADGET REQUEST »](#)



[RESERVE A ROOM »](#)



[COMPUTERS & PRINTING »](#)



[FIND AN EXPERT »](#)

Quick Links

For Undergrads

[Research Guides](#)

[Clough Commons](#)

[Request a Research Consultation](#)

[SEE ALL »](#)

For Graduate Students

[Graduate Student Community](#)

[Theses & Dissertations](#)

[Citation Management](#)

[SEE ALL »](#)

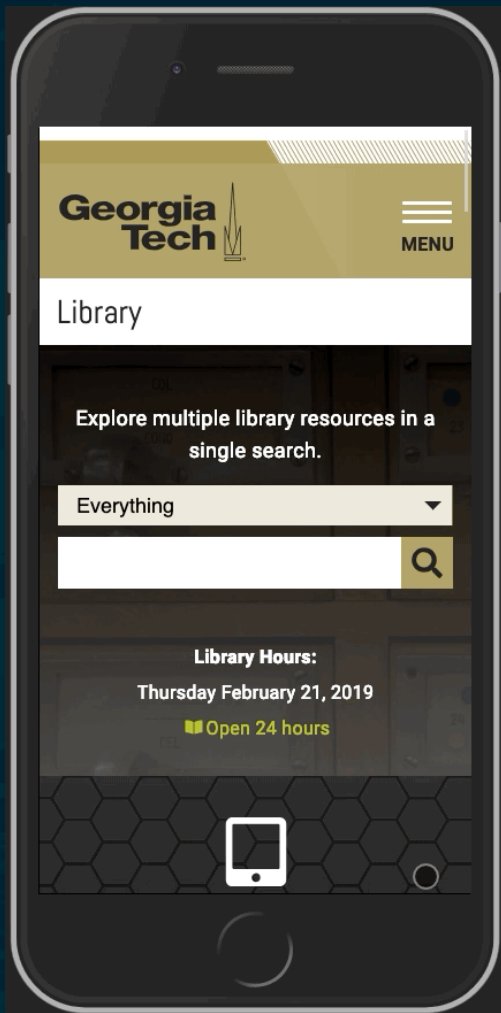
For Faculty & Instructors

[Instruction Support](#)

[Document Delivery/LENDS](#)

[Research Data Management](#)

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Planning & Research



The Georgia Tech Library seeks a proposal by **February 28, 2018** encompassing:

1. **Advanced Discovery**

Meet with the project team at the Georgia Tech Library to explore initial discovery documentation, determine depth of scope and schedule

2. **Audit**

Benchmark vs. Georgia Tech brand standards, best practices for user experience

3. **Build**

Drupal 8 framework and theme. New, optimal information architecture to provide best-in-class structure, navigation, and user paths. Pages specified by client.

4. **Create**

Design elements, CSS, HTML header/footer. Design comps for Virtual Browsing. Wireframes for key content sections.

5. **Provide**

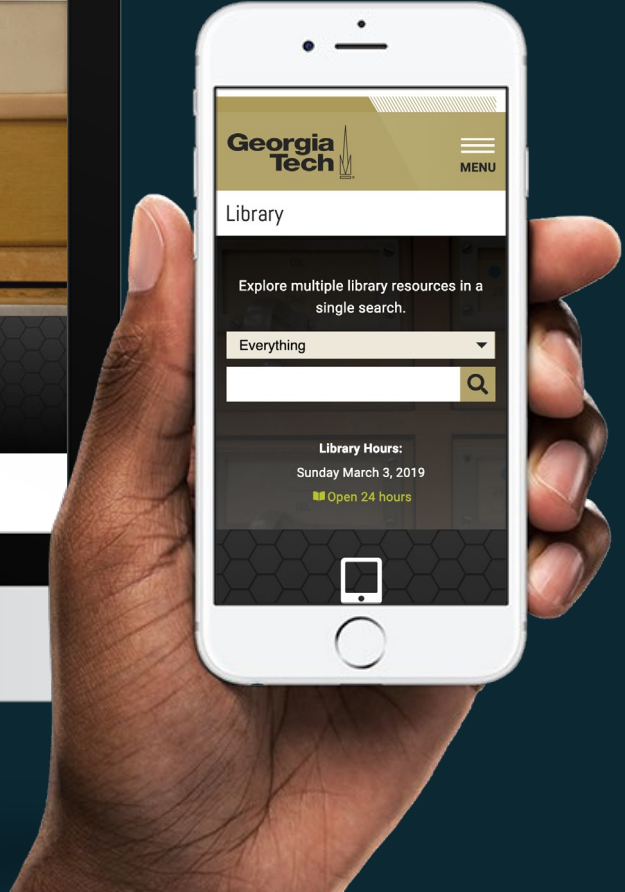
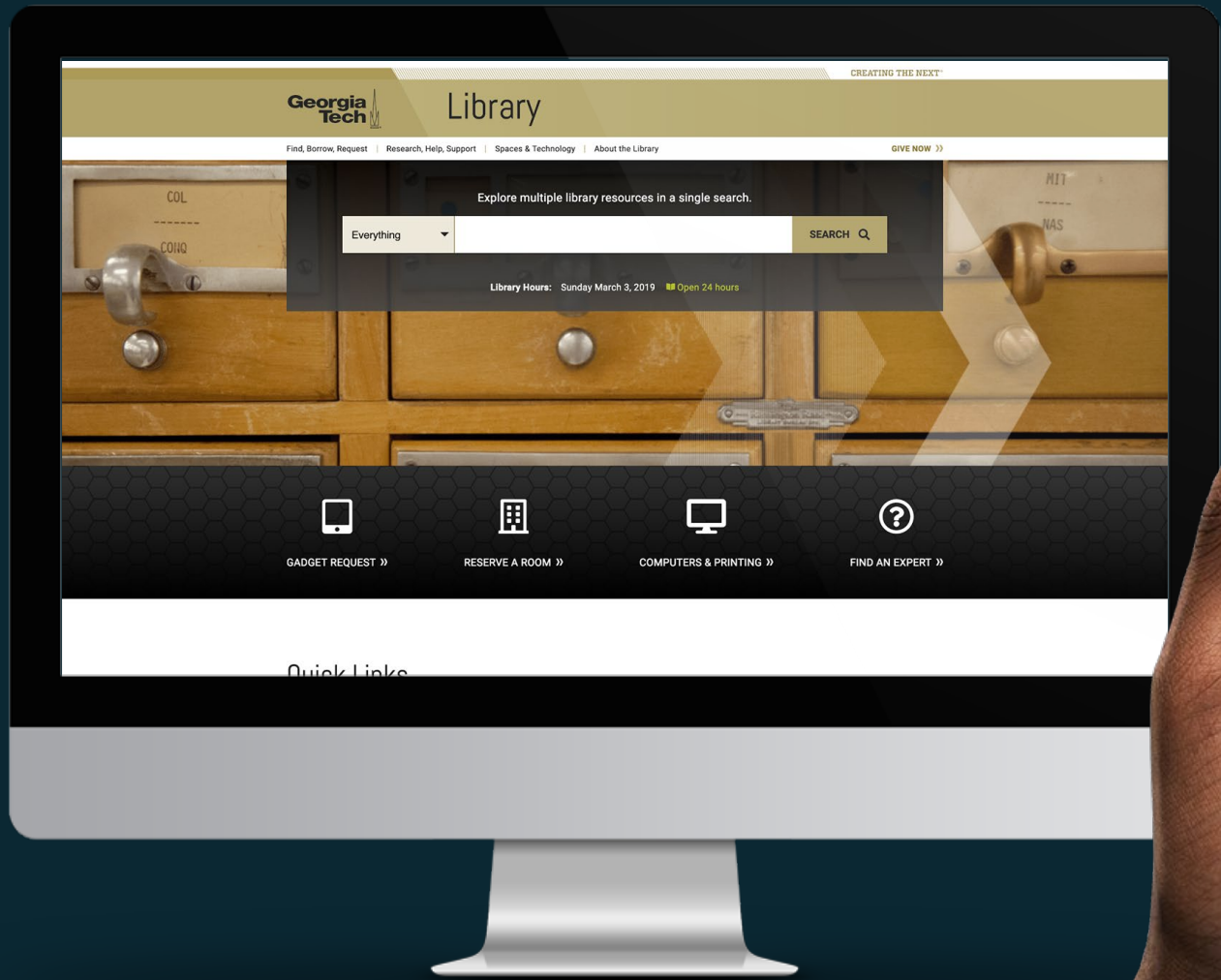
Strategic recommendations for staffing, Drupal development of IA and wireframes into new site, ongoing maintenance, additional features, search engine optimization, scheduling, and budget.



DRUPAL FUNCTIONAL SPECIFICATION

Georgia Tech Library

Drupal 8 Design + Build



Welcome to LIBRARY.HARVARD



Search for tools, services, and locations

SEARCH ▶

Need to search for books, articles, or other materials? [Use HOLLIS.](#)

FILTER SPACES <<

Clear All

Collapse All ▲

BOOKING OPTIONS ▼

Reservable

ROOM TYPE ▼

Group Study Room

Independent Study Room

Media Production Space

Meeting and Presentation Space

Open Space

Study Carrel

Showing **10** of **103**

LOAD MORE

Map

Satellite



Botany Libraries Farlow Reading Room – Main Level

OPEN SPACE

📍 Botany Libraries in Harvard University Herbaria



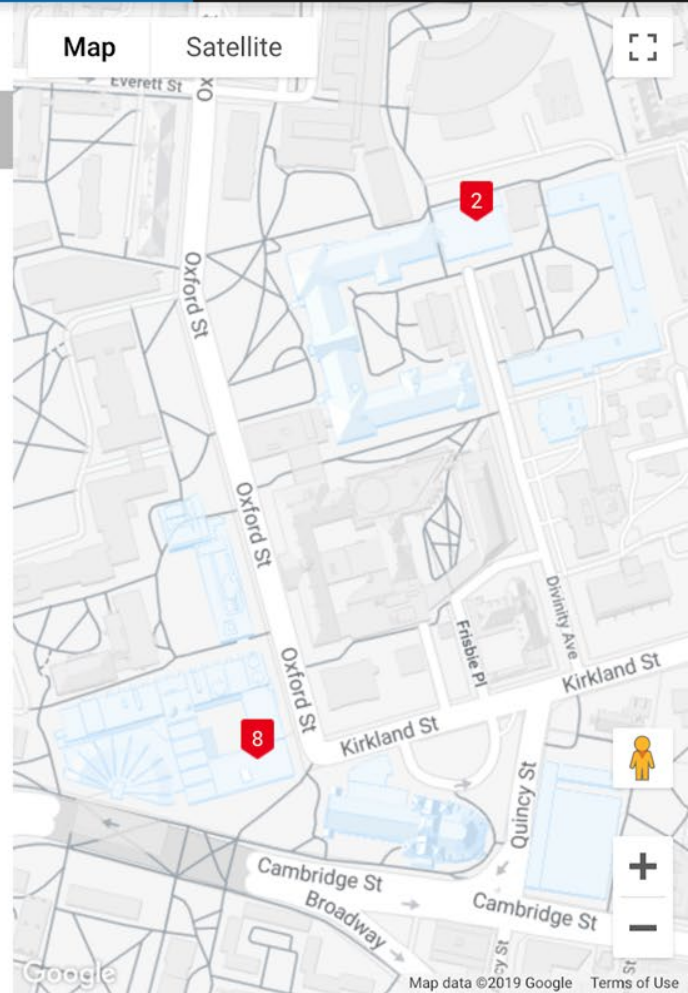
FEATURES

Group tables

Printers

Public computers

Single stall restrooms



CATALOG  Explore books, music, movies, and more

[Advanced Search](#) | [Browse by...](#) | [WorldCat](#)

 [Library Hours](#) |  [Study Rooms](#) |  [Events & Workshops](#)

[Borrow, Renew, Request](#)

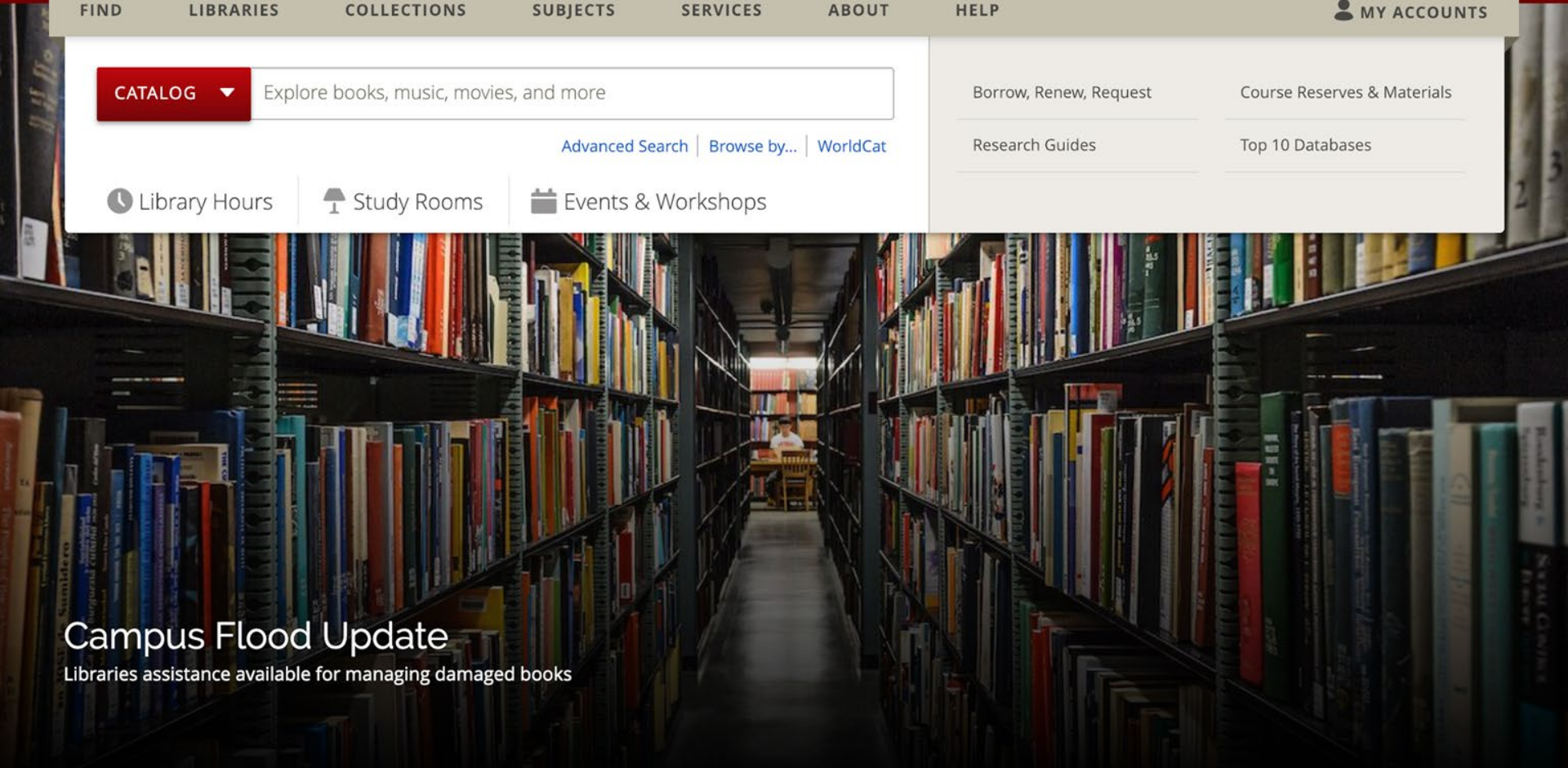
[Course Reserves & Materials](#)

[Research Guides](#)

[Top 10 Databases](#)

Campus Flood Update

Libraries assistance available for managing damaged books



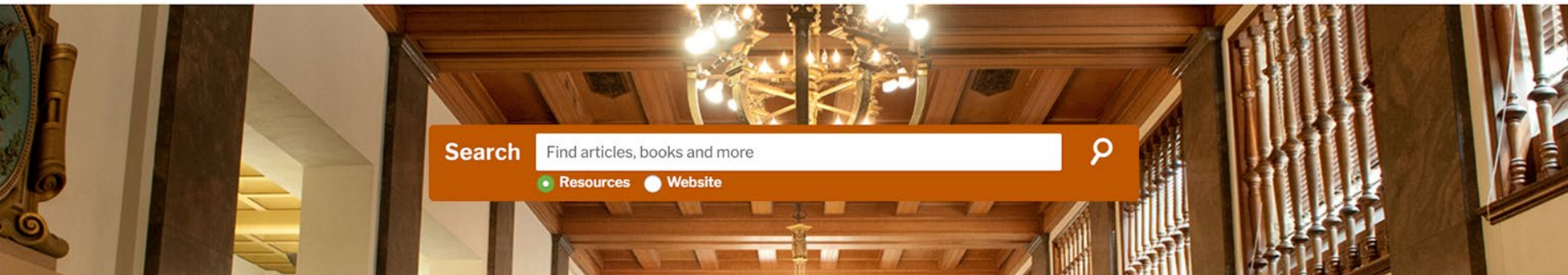



FIND, BORROW, REQUEST

RESEARCH HELP & SUPPORT

STUDY SPACES & TECHNOLOGY

ABOUT THE LIBRARIES



Search Find articles, books and more 

Resources Website

Books & Media

Search the library catalog for books, ebooks, and media

Articles & More

Find articles and more by keyword or title

Databases

Find library databases for your research subject

Journals

Find a journal, newspaper, or magazine by title

Research Guides

Find guides created by subject librarians to help you with your research

Google Scholar

Find articles using Google Scholar

Reserve a Study Room

See available rooms and book a room for group study

Cite your Sources

Learn how to properly cite sources for your papers





Libraries &
HOURS



Reserve a
SPACE



Computers &
PRINTING



Your Library
ACCOUNT

Graduate Students

- Citation Management
- Data Resources & Management
- Graduate Funding Info Service
- Research Commons Events
- [MORE >](#)

Undergraduate Students

International Students

Faculty/Staff

Alumni/Visitors

K-12 Visitors

[MORE >](#)

Start Your Research


- Articles & Research Databases
- E-journals
- Encyclopedias & Dictionaries
- E-Newspapers, Media, Maps & More
- Research Guides

Reserve a
SPACE

Your Library
ACCOUNT

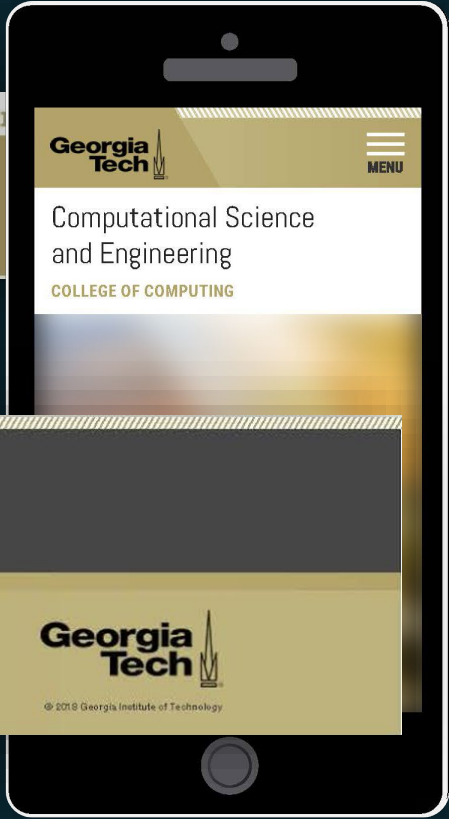


CREATING THE



Computational Science and Engineering

COLLEGE OF COMPUTING



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ACCESSIBILITY
ACCOUNTABILITY
ACCREDITATION
EMPLOYMENT



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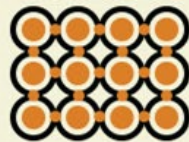
Component - based Design Approach



ATOMS



MOLECULES




ORGANISMS



TEMPLATES



PAGES



Component Library Design

RESEARCH TOOLS

- Library Catalog
- Find Databases
- eJournals
- Course Reserves
- Research Guides
- Library Classes
- more...

SERVICES

- Computers & Printing
- Borrow
- Renew Books
- Interlibrary Loan
- Reserve a Room
- Subject Librarians
- more...

ABOUT US

- Hours
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- Jobs
- more...

SERVICES & RESOURCES:

- Core Help Desk
- Advising
- Tutoring
- Center for Academic Enrichment
- Center for Academic Success
- Center for Serve-Learn-Sustain
- Center for Teaching & Learning
- Communication Center
- OIT Technology Support Center

EVENTS CALENDAR

RESERVE A ROOM

FACT SHEET | BROCHURE



LIBRARY ADMINISTRATION





Find Materials

- > Library Catalog
- > Articles
- > Databases
- > Journals
- > Course Reserves

Borrow & Request

- > Checkout, Renew & Return
- > Request from Another Library (Interlibrary Loan)
- > Suggest a Purchase



Georgia Tech Home

Map Directory

Offices

Find, Borrow, Request

- > Find Materials
- > Borrow & Request

Research Help & Support

Study Spaces & Technology

About the Library



Georgia Tech Home

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Articles

Databases

Journals

Borrow & Request

Checkout, Renew & Return



Library

[Find, Borrow, Request](#) | [Research Help & Support](#) | [Spaces & Technology](#) | [About the Library](#)

[GIVE NOW >>](#) [SEARCH Q](#)

Find Materials

- [Library Catalog](#)
- [Articles](#)
- [Databases](#)
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- [Course Reserves](#)

[SEE ALL >>](#)

Borrow & Request

- [Checkout, Renew & Return](#)
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Special Collections & Archives



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Everywhere

Search for ...

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Find Materials

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- [Articles](#)
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- [Course Reserves](#)

Borrow & Request



Everything



Links to individual resource searches here?

Temporary Message Area

Get Help

Lorem ipsum

Library Spaces

Lorem ipsum

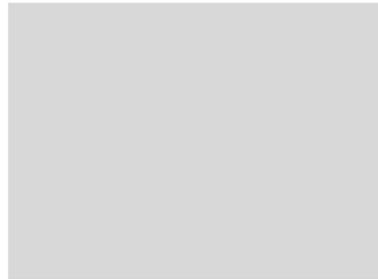
Quick Links

For Undergraduate Students

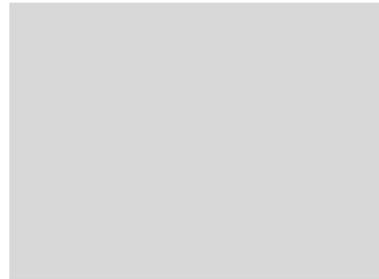
For Graduate Students

For Faculty & Staff

News



Events



Temporary Message Area

Get Help

Lorem ipsum

Library Spaces

Lorem ipsum

Quick Links

For Undergraduate Students

For Graduate Students

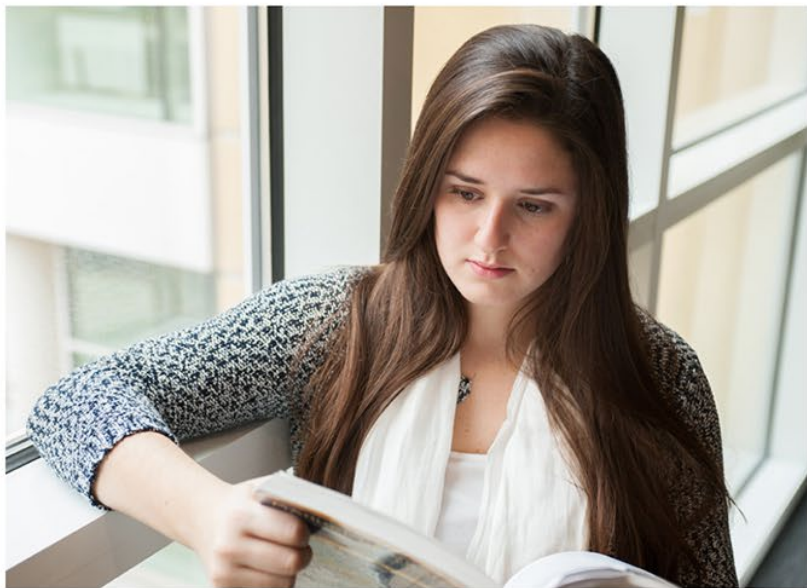
For Faculty & Staff

News



Events





Teaching & Learning

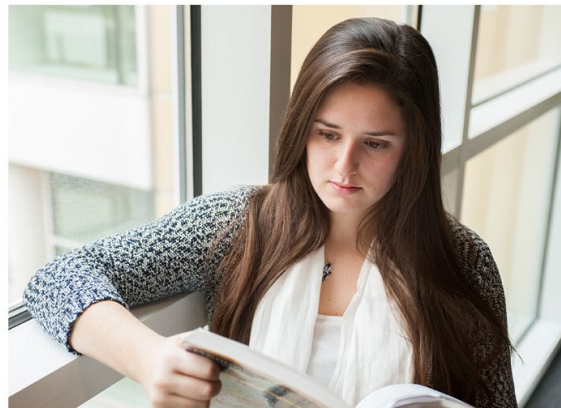
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Teaching & Learning

[Classes & Events](#)

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[Contact your Subject Librarian](#)

[Research Guides](#)



The Georgia Tech Artifacts collection features a selection of artifacts and Georgia Tech memorabilia from the Archives' collections.

[Browse the Collection](#)

A Thousand Wheels are Set in Motion showcases drawings, floorplans, and a detailed history of Georgia Tech's campus.

[Explore Campus History](#)

You get to speak to the gatekeepers and stakeholders, and you get a great insight into their requirements and influences.

[Request a Gadget](#)

A Thousand Wheels are Set in Motion showcases drawings, floorplans, and a detailed history of Georgia Tech's campus.

[Explore Campus History](#)

Georgia Tech Advertisements 1894-1948 includes advertisements selected from historic student publications.

[Go Back In Time](#)

You get to speak to the gatekeepers and stakeholders, and you get a great insight into their requirements and influences.

[Computers & Printing](#)

You get to speak to the gatekeepers and stakeholders, and you get a great insight into their requirements and influences.

[Request a Gadget](#)

You get to speak to the gatekeepers and stakeholders, and you get a great insight into their requirements and influences.

[Computers & Printing](#)

You get to speak to the gatekeepers and stakeholders, and you get a great insight into their requirements and influences.

[Reserve a Room](#)



GADGET REQUEST



GADGET REQUEST »



COMPUTERS & PRINTING »



RESERVE A ROOM »



FIND AN EXPERT »



GADGET REQUEST »



COMPUTERS & PRINTING »



RESERVE A ROOM »



FIND AN EXPERT »



FIND AN EXPERT »

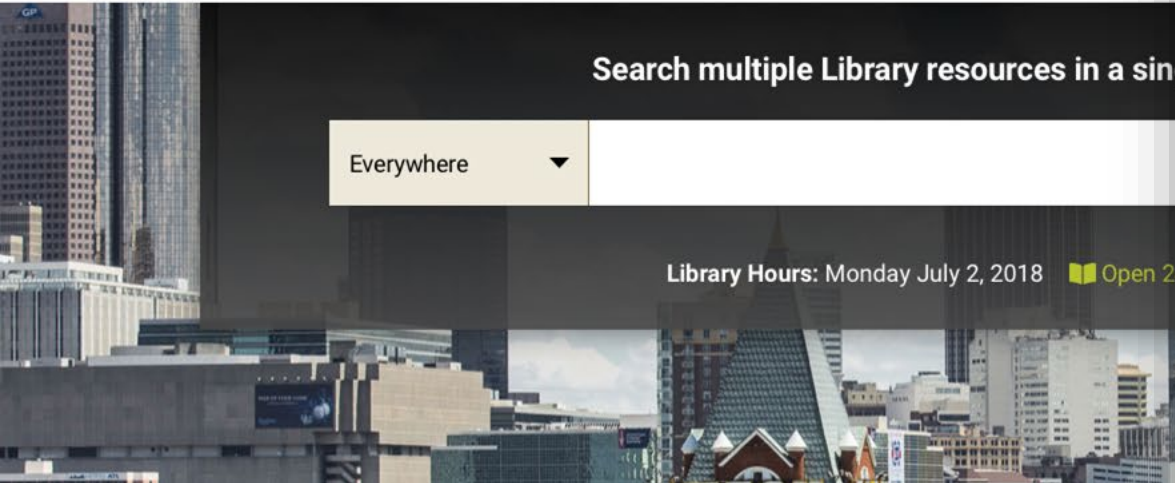


FIND AN EXPERT »



Library

Find, Borrow, Request | Research Help & Support | Spaces & Technology | About the Library



Search multiple Library resources in a single search.

Everywhere ▾

Library Hours: Monday July 2, 2018 Open 24 hours



Library

Search multiple Library resources in a single search.

Everywhere ▾

Library Hours: Monday July 2, 2018

Open 24 hours



Everything

aerospace

SEARCH Results Found In: [Library Website \(6\)](#)

Books & Media



Articles

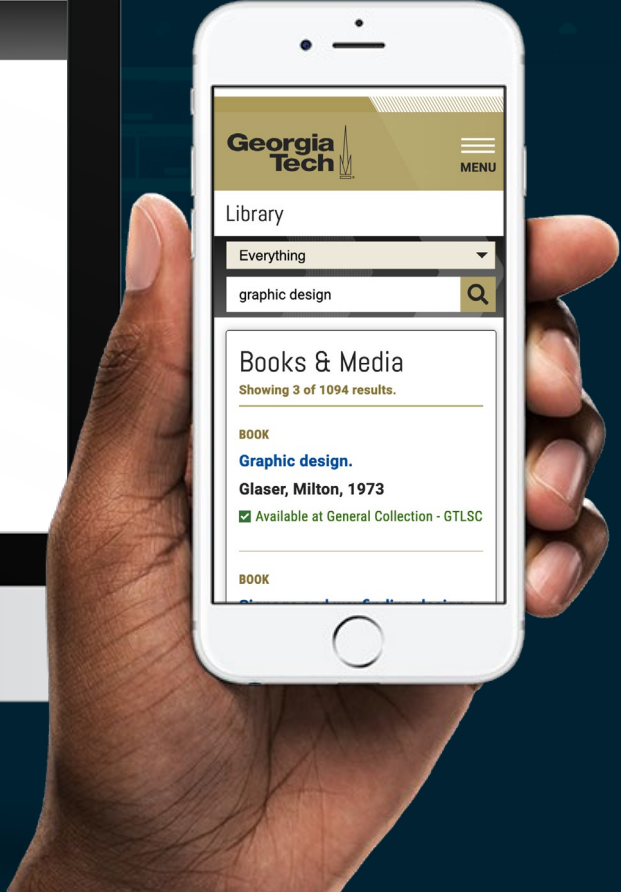
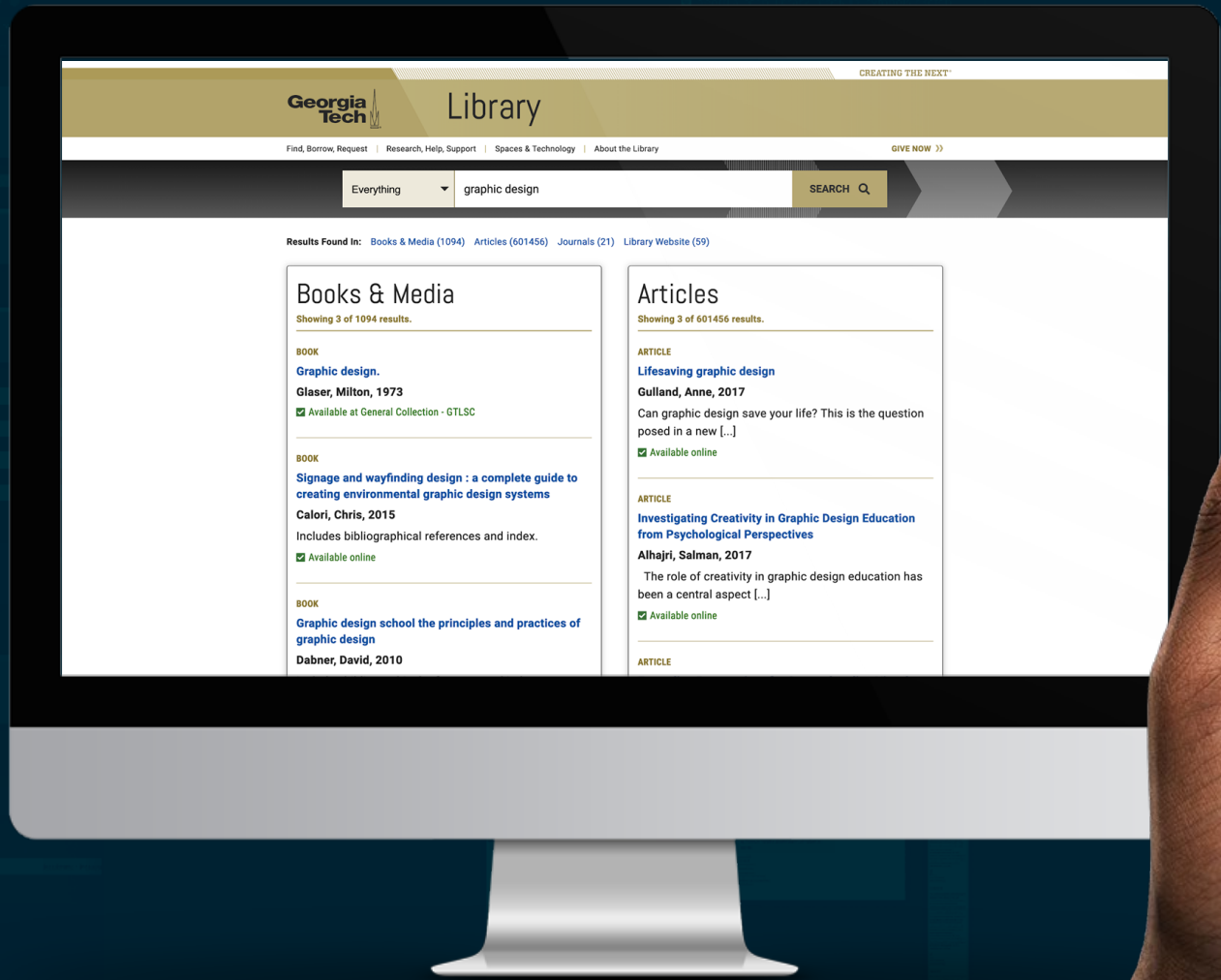


Journals



Library Website

Showing 2 of 6 results.





Library

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[GIVE NOW](#) | [SEARCH](#)

[Home](#) | [About the Library](#) | [News](#) | [Library Renewal Moves into Next Phase of Construction](#)

Library Renewal Moves into Next Phase of Construction





Demo

Let's see how it works!