Searching For SCHOLARLY INFORMATION: Where & How

LIBRARY SESSION FOR ENCS 282

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AGENDA

1. Where to search?
2. How to evaluate?
3. What are scholarly sources?
4. How to access library tools?

WHAT SEARCH TOOL DO YOU USE TO FIND ACADEMIC INFORMATION?

WHAT IS THE DIFFERENCE?

GOOGLE SCHOLAR

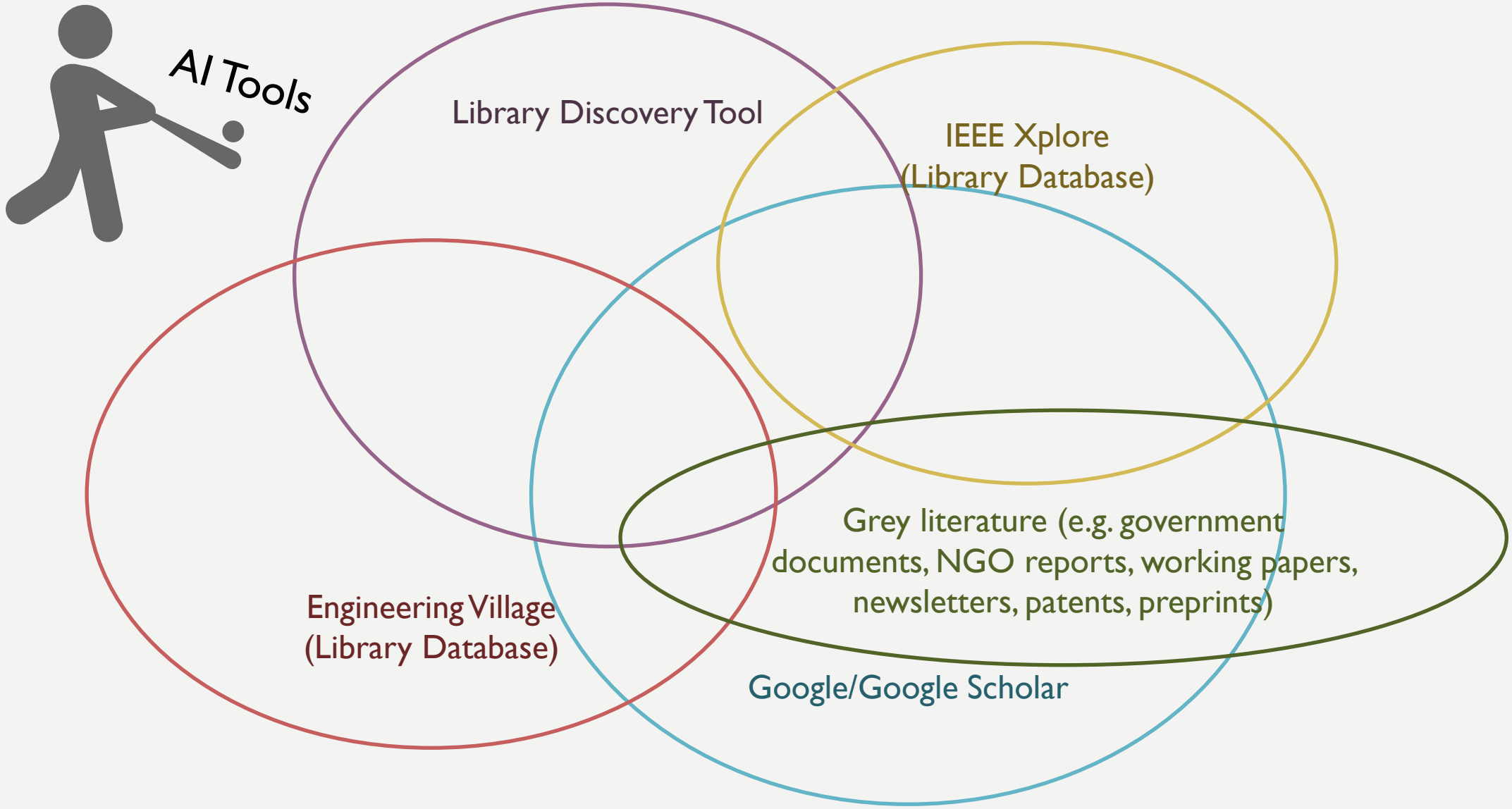
Volume | Quantity | Quick

LIBRARY DATABASES

Depth | Quality | Thorough

Left image: Yinan Chen, Dining Court, public domain, https://pixabay.com/photos/dining-court-shopping-mall-corridor-347314/
Right image: Jason Briscoe, Cooking, public domain, https://unsplash.com/photos/VBsG1VOgLIU

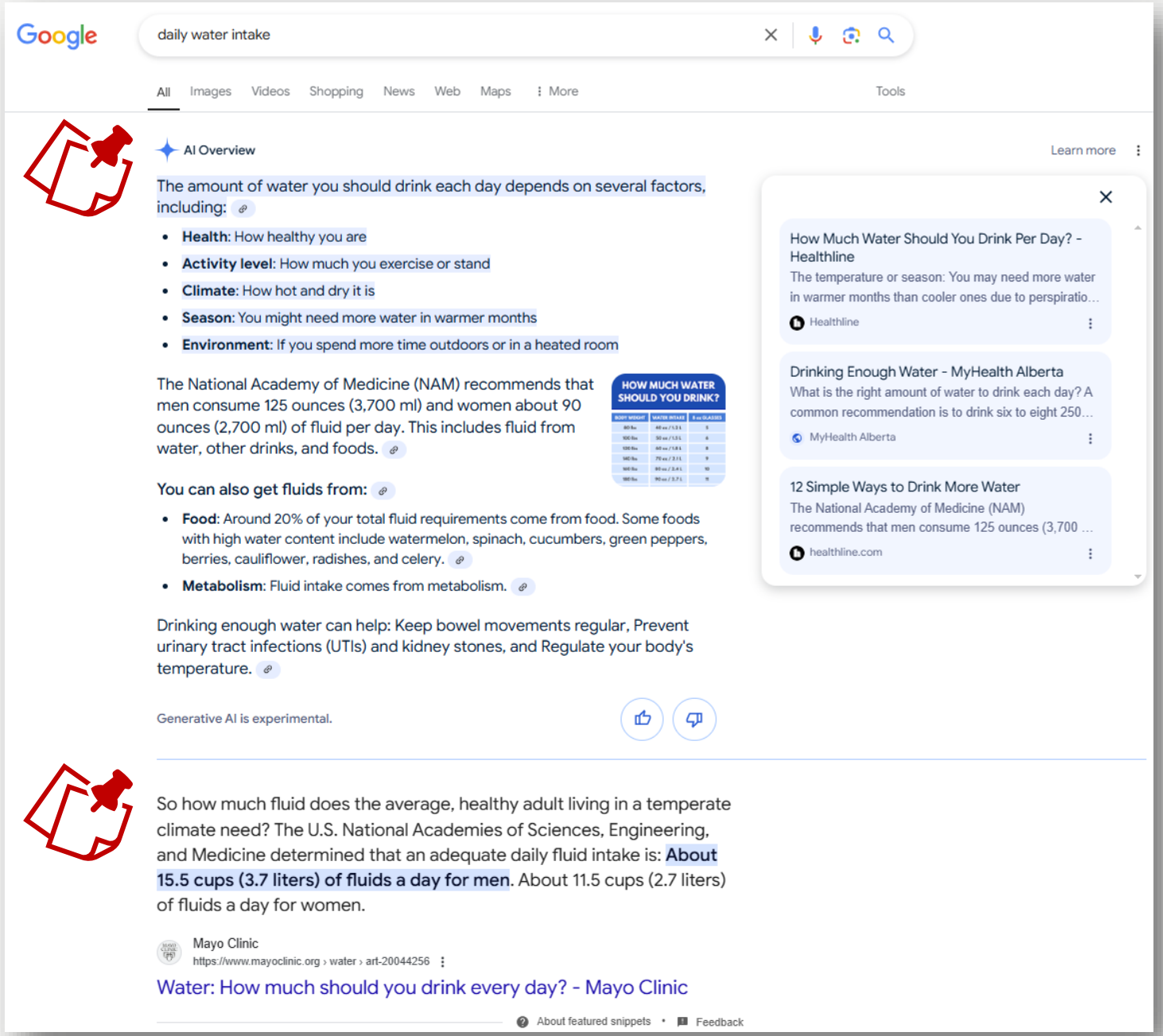
WHERE SHOULD YOU SEARCH?



HOW IS USING CHATGPT DIFFERENT FROM GOOGLING?

HOW ARE THEY DIFFERENT?

GOOGLE	CHATGPT
Information retrieval	Information generation
Index of web-based information	Human-like responses to prompts
List-based results, one-way interaction	Conversation-based results, often very persuasive
Retrieve results based on ranking algorithms (e.g. keyword matching, relevance, page linking)	Generate unique responses based on what it has learned about patterns and sequences of words from massive training datasets



THE SEARCH AS WE KNOW IT IS CHANGING

- GenAI-powered functionality is being introduced in major search engines such as Google and Bing
- The AI Overview does point to actual links, but the summary is subject to hallucination/confabulation
- Google has the disclaimer "Generative AI is experimental" in its AI Overview

ACKNOWLEDGING THE USE OF AI TOOLS OR AI-GENERATED CONTENT

BE TRANSPARENT AND DOCUMENT THE PROCESS

- Acknowledge functional uses (e.g. edit a passage, generate an outline, summarize an article) of AI tools where appropriate (e.g. Introduction, Declaration, Method).

- Provide a citation whenever you paraphrase, quote, or incorporate into your own work any content (e.g., text, image, data) that was created by AI tools.
  - Include the prompt used in the text. For long responses and interactions, provide it as an appendix or as a direct link (via a browser extension like ShareGPT or A.I. Archives)
  - An example in IEEE style:

> When prompted with "Is the left brain right brain divide real or a metaphor?" the ChatGPT-generated text indicated that although the two brain hemispheres are somewhat specialized, "the notation that people can be characterized as 'left-brained' or 'right-brained' is considered to be an oversimplification and a popular myth" [1].
>
> [1] Text generated by ChatGPT, OpenAI, May 21, 2024, https://chat.openai.com/chat.

Adapted from Citing AI-generated content in Chicago Manual of Style and a FAQ in Chicago Manual of Style.

EVALUATING INFORMATION

STRATEGIES AND CONSIDERATIONS

THINK, PAIR, SHARE

Talk to the person next to you for 5 minutes:

What are some ways to ensure that the information you find online is accurate and reliable?

EVALUATING INTERNET INFORMATION

What do fact checkers do?

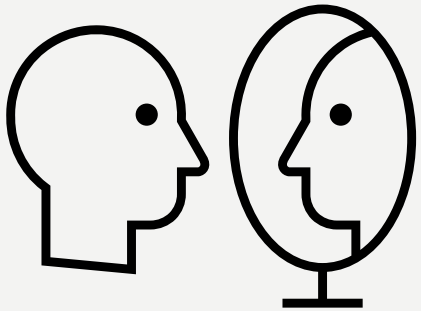
- Spend more time scanning the snippets on the results page before clicking
- Know what you read before you read it
- More lateral reading than vertical reading

Caulfield, M. (2019, June 19). SIFT (The Four Moves). *Hapgood*. https://hapgood.us/2019/06/19/sift-the-four-moves/
Wineburg, S., & McGrew, S. (2019). Lateral Reading and the Nature of Expertise: Reading Less and Learning More When Evaluating Digital Information. *Teachers College Record, 121*(11), 1–40. https://doi.org/10.1177/016146811912101102

BE MORE INTENTIONAL

Consider these factors as much as possible

- Who is behind the information?
- What is the evidence?
- What do other sources say?
- Who is the intended audience?
- What is scope/depth/breadth?
- How current is the information?



Do the sources confirm or contradict with your prior beliefs?

Caulfield, M. (2019, June 19). SIFT (The Four Moves). *Hapgood*. https://hapgood.us/2019/06/19/sift-the-four-moves/
Wineburg, S., & McGrew, S. (2019). Lateral Reading and the Nature of Expertise: Reading Less and Learning More When Evaluating Digital Information. *Teachers College Record, 121*(11), 1–40. https://doi.org/10.1177/016146811912101102

TYPES OF INFORMATION SOURCES

WHAT IS CONSIDERED SCHOLARLY?

NAVIGATING SCHOLARLY INFORMATION

ANSWER POLL QUESTIONS ON MENTIMETER

CONTEXTUALIZE THE PROBLEM WITH INFORMATION

You need to design a playground for a neighbourhood

Economical

Environmental

Political

Legal

Cultural

Social

Historical

Government data and statistics

Trade magazines

Photos

Encyclopedias

Standards and codes

Materials properties

Books

Handbooks

Conference proceedings

Maps

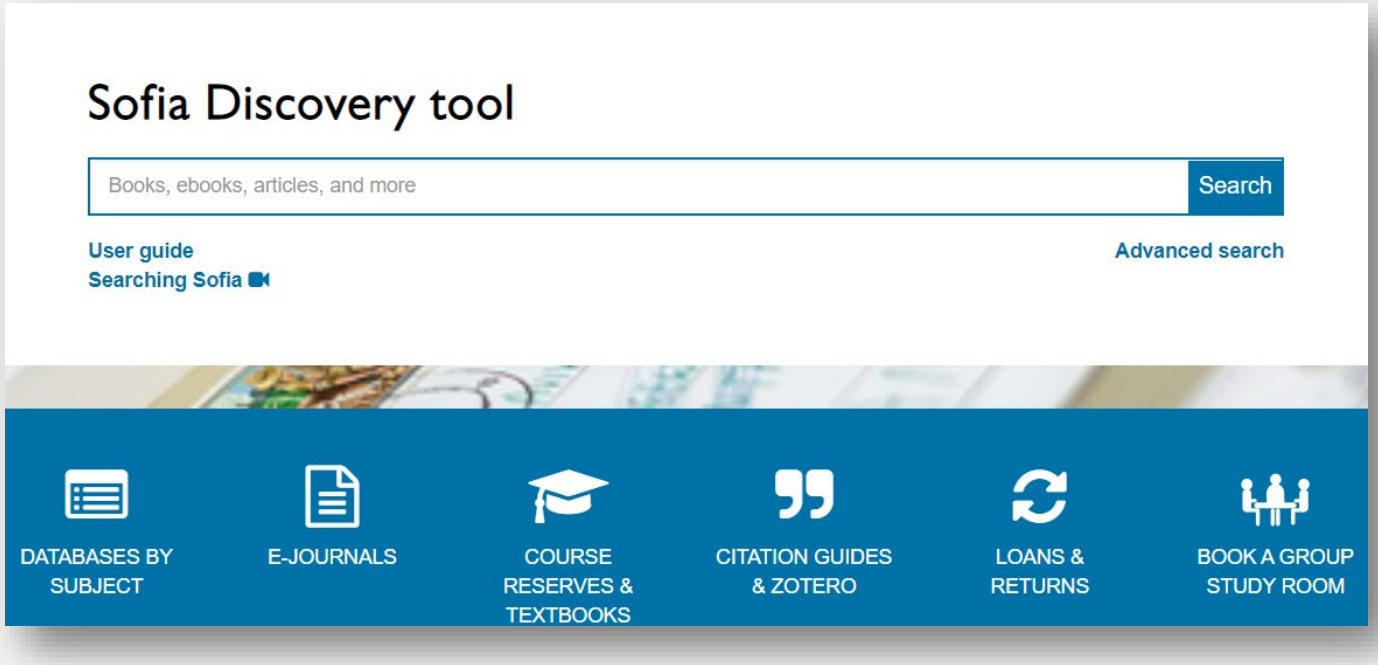
Technical reports

Research articles

Van Epps, A., & Cardella, M. (2013). Scout the lay of the land: Understanding the broader context of a design project. In M. Fosmire & D. Radcliffe (Eds.), Integrating Information into the Engineering Design Process (pp. 101-114). West Lafayette: Purdue University Press.

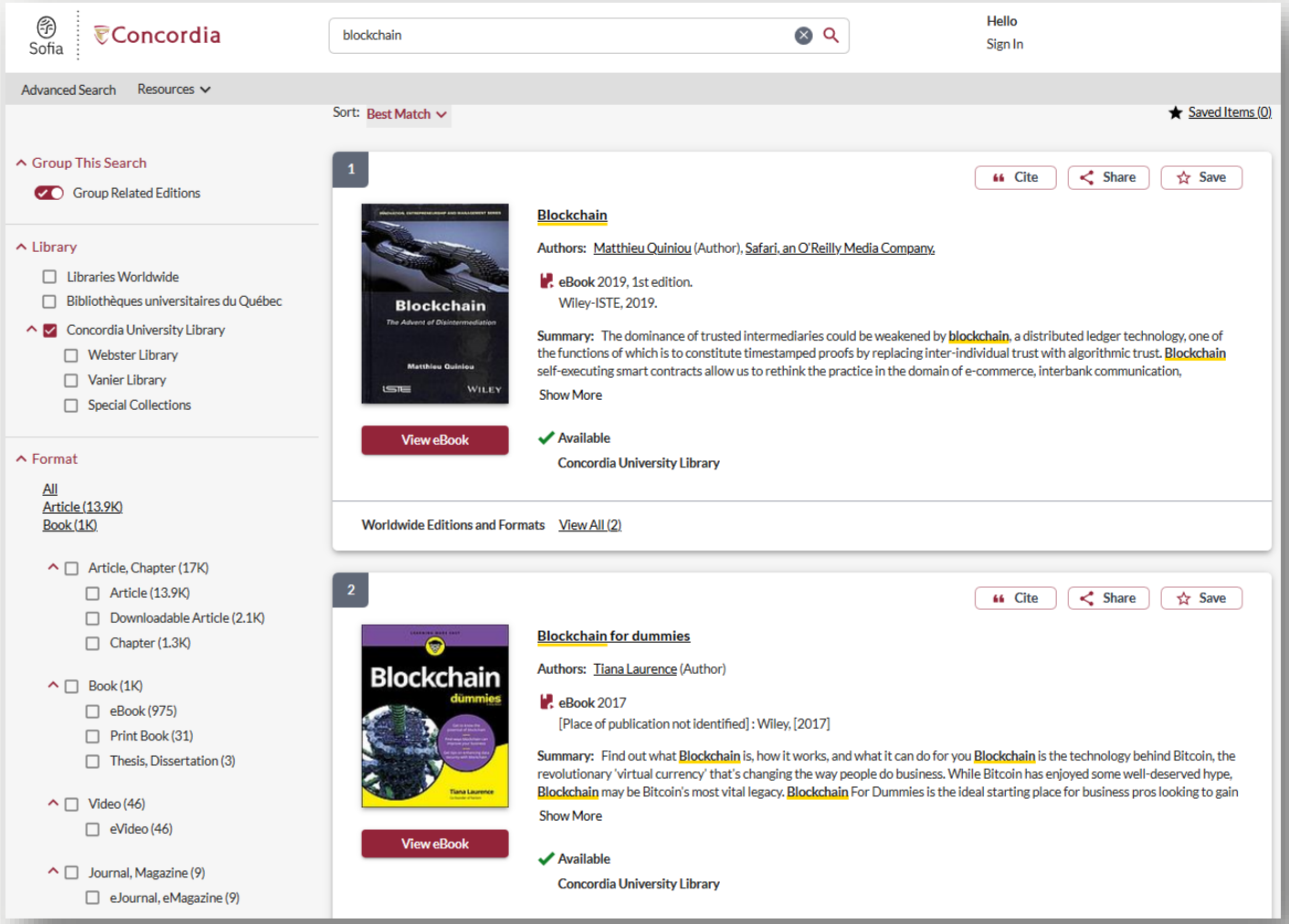
LIBRARY DISCOVERY TOOL

THE MAIN LIBRARY SEARCH TOOL



LIBRARY DISCOVERY TOOL

- Front and centre on the library homepage
- A good starting point for a general search across library resources
- Answer questions such as:
  - Does the library have this book?
  - Does the library have this journal article?
  - Does the library have some background/overview information on a topic?



LIBRARY DISCOVERY TOOL

- A search for a broad keyword such as *blockchain*
- Refine options include:
  - Format types (e.g. ebooks)
  - Publication years
- Shows results with Concordia full text access by default
  - Easily expand to other university libraries in Québec or Worldwide
  - Easily make requests for items from other university libraries

LIBRARY DATABASES

OVER 400 OF THEM ORGANIZED BY DISCIPLINE

Engineering Village™

IEEE Xplore® Digital Library

Clarivate Web of Science™

SciFinder^n® A CAS SOLUTION

Scopus®

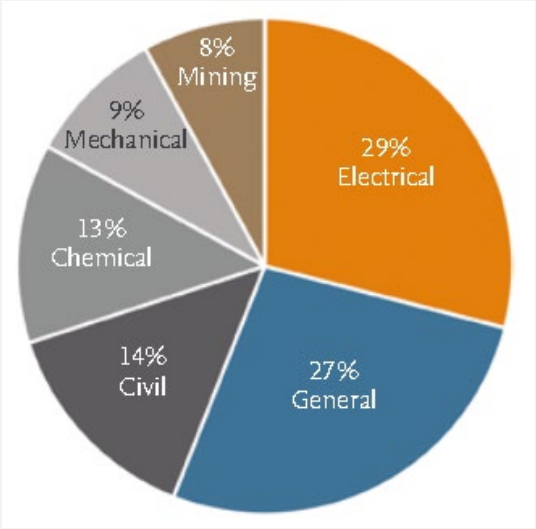
Knovel®

LIBRARY DATABASES

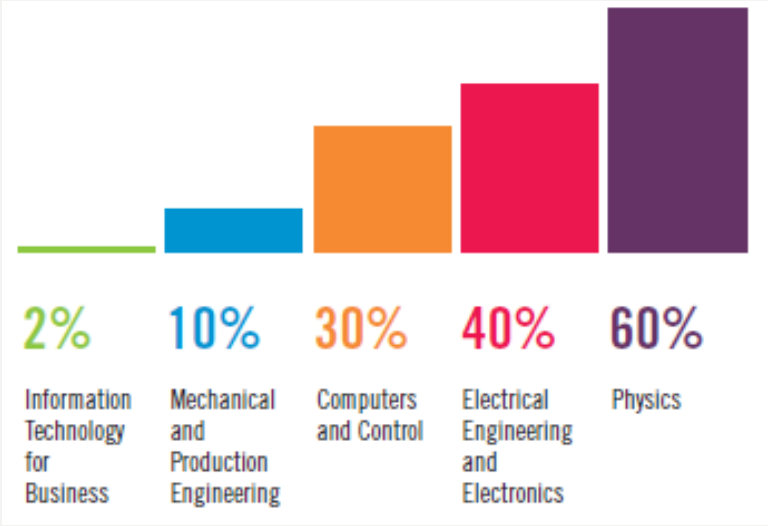
- Content is usually more in-depth and specialized
- More options to search, expand, or refine
- Answer questions such as:
  - Where can I find journal articles on a specific aspect of a topic
  - How can I combine different elements/keywords in a search?

ENGINEERING VILLAGE

A CLOSER LOOK AT AN ENGINEERING DATABASE

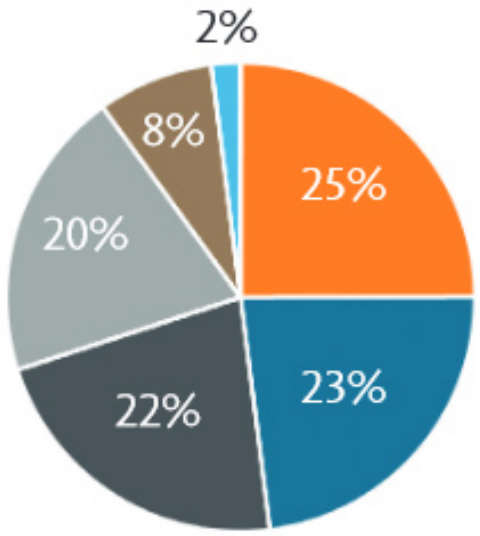


Compendex



Inspec

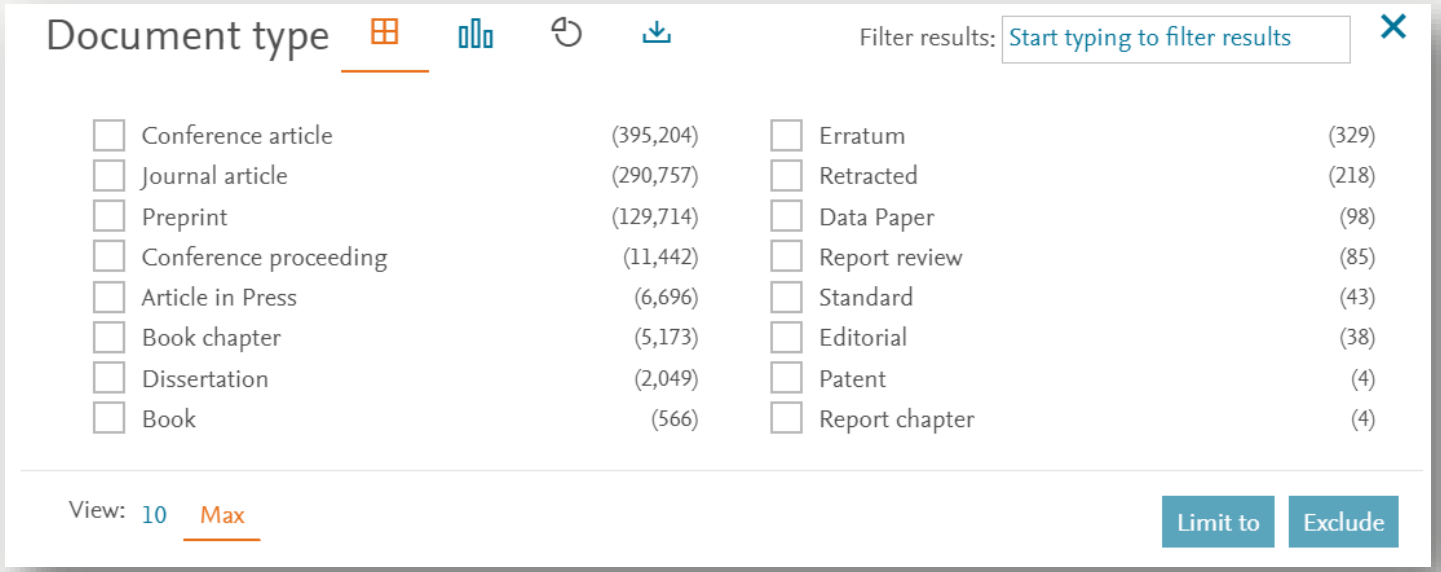
- Human Geography – 25%
- Environmental Sciences – 23%
- Physical Geography – 22%
- Geology – 20%
- Oceanography – 8%
- Geomechanics – 2%



GEOBASE

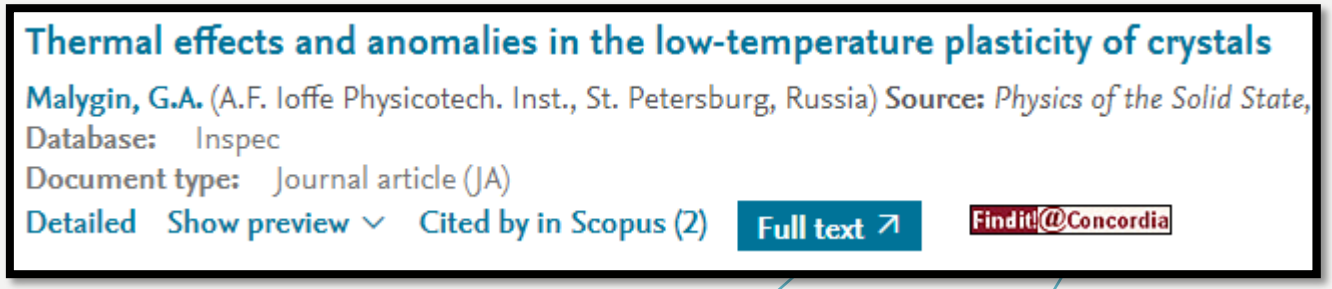
WHAT CONTENT IS INCLUDED?

With a coverage of 1884 to the present, the three indexes **Compendex**, **Inspec**, and **GEOBASE** provide content in general engineering as well as more specialized engineering disciplines.



IS THE CONTENT PEER-REVIEWED?

- Journal articles are peer-reviewed
- Some conference articles/proceedings are peer-reviewed
- Recently, preprints have been included in the results in Compendex
- Preprints are NOT peer-reviewed, but are helpful in exploring the latest papers



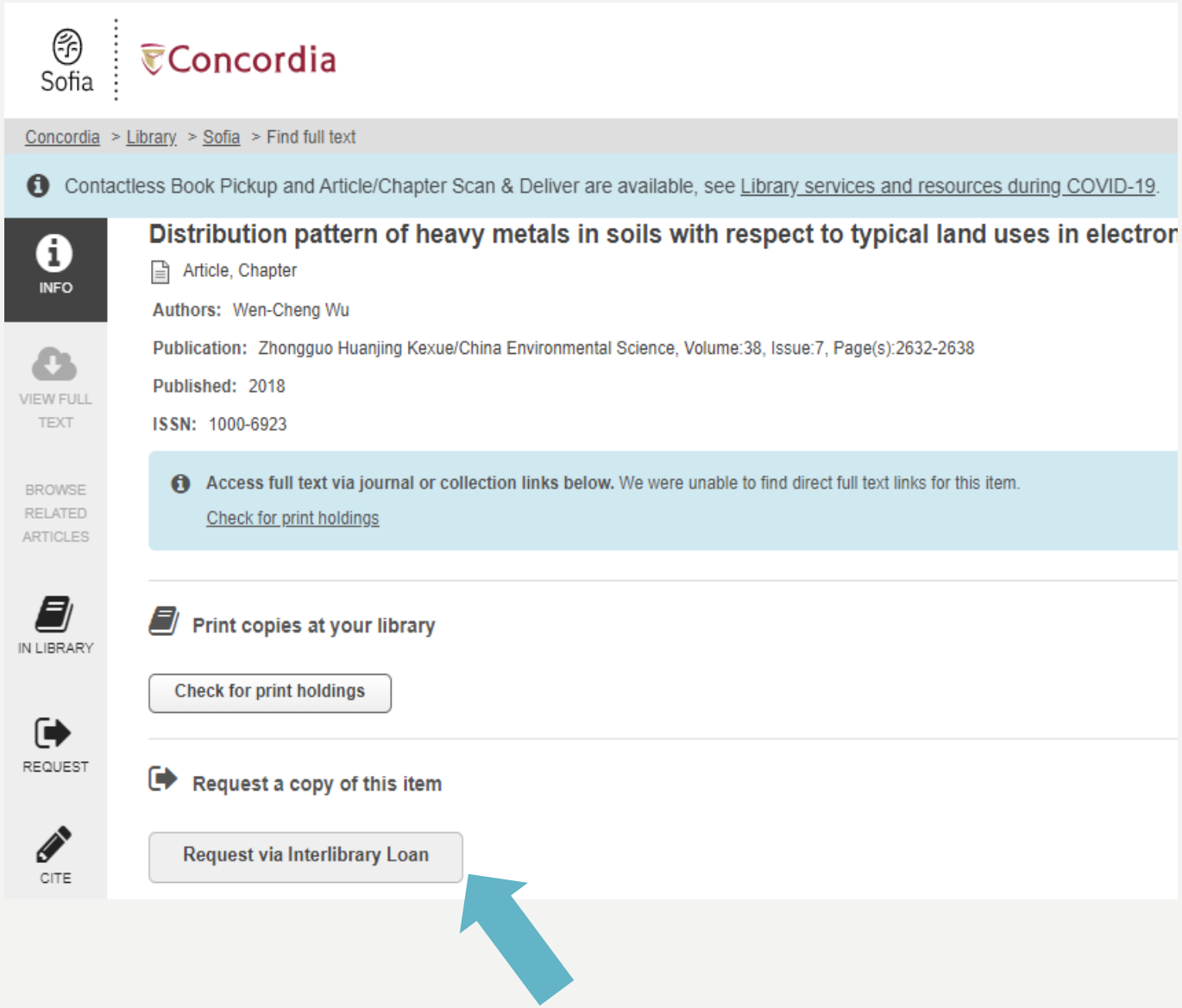
"Full text" button, if one exists

"Find it @ Concordia" button to check the library's other subscriptions. If not available, request it via **Interlibrary Loan**.

HOW TO ACCESS FULL TEXT?

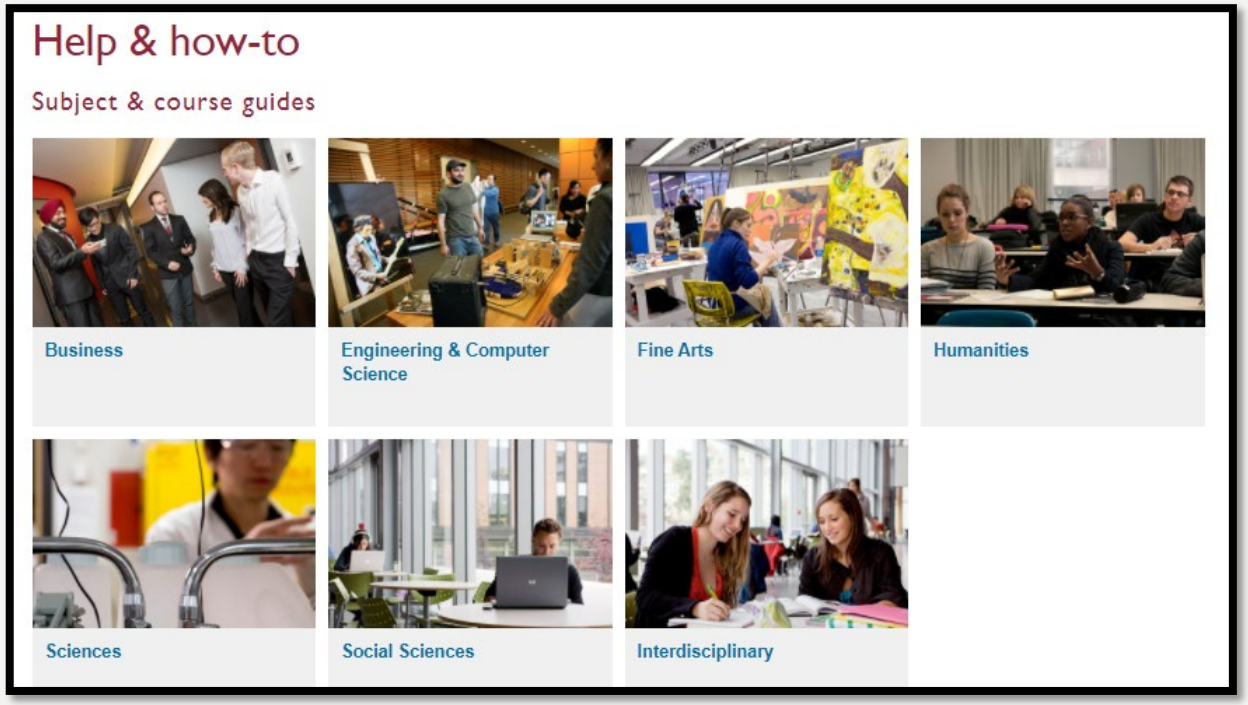
Full text may be readily available. If not, the "Find it @ Concordia" button can help check for full text availability in the library.

INTERLIBRARY LOAN



- If Concordia Library doesn't have it, use Interlibrary Loan
- Takes a few days or longer to process depending on the item

A QUICK DEMO OF ENGINEERING VILLAGE



HELP & HOW-TO GUIDES

Subject guides are available for all schools, including one for Engineering and Computer Science.

General guides cover various topics from peer review articles to annotated bibliography.

ASK A LIBRARIAN

Contact the library in-person, by email, chat, or phone.

Contact your subject librarian (that's me!)

Chloe Lei

Teaching & Research Librarian, Engineering & Computer Science

chloe.lei@concordia.ca

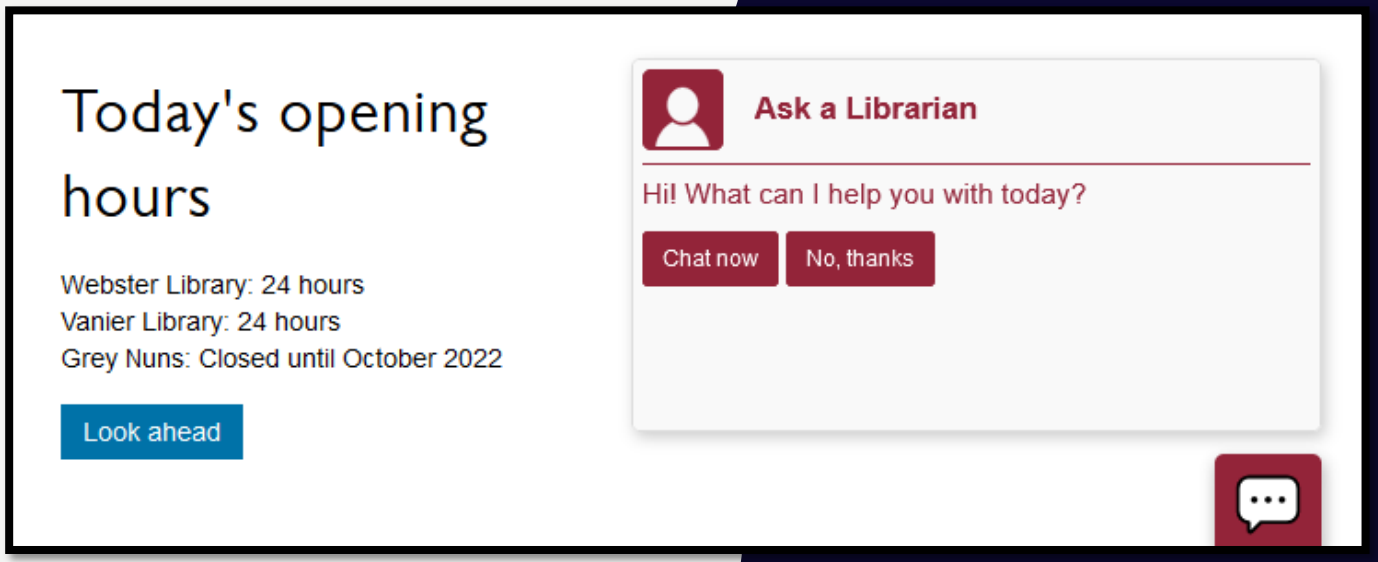
514-848-2424 ext. 7909

Feel free to contact me for an appointment in-person or online.

SCHEDULE AN APPOINTMENT

I can help you with library resources and services, including but are not limited to:

- Locate specific items (e.g. books, articles)
- Navigate resources related to engineering and computer science
- Literature searching
- Citations and references
- Recommend new resources



QUESTIONS?