ENGINEERING & COMPUTER SCIENCE

GRADUATE RESEARCH ESSENTIALS

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HAVE YOU ALREADY BEEN TO THE LIBRARY?

SHARE YOUR ANSWER IN THE CHAT BOX
WHAT IS ONE THING YOU ALREADY KNOW ABOUT THE LIBRARY?

SHARE YOUR ANSWER IN THE CHAT BOX
WHAT IS ONE THING YOU WOULD LIKE TO LEARN FROM THE WORKSHOP?

SHARE YOUR ANSWER IN THE CHAT BOX
AGENDA

1. Major library search tools and digital collections
2. Literature searching in Engineering Village
3. Other tools to stay organized and track research
WHAT SEARCH TOOL DO YOU USE TO FIND ACADEMIC INFORMATION?

SHARE YOUR ANSWER IN THE CHAT BOX
WHERE SHOULD YOU SEARCH?

- Google Scholar
- Library Discovery Tool
- Engineering Village (Library Database)
- IEEE Xplore (Library Database)
- Grey literature (e.g. government documents, NGO reports, working papers, newsletters, preprints)
- Google Scholar
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
LIBRARY DATABASES

OVER 400 OF THEM ORGANIZED BY DISCIPLINE
**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
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.
WHAT CONTENT IS INCLUDED?

“Publications must consist of peer-reviewed engineering content and have a publicly available description of the peer review process. Exceptions would be trade journals and some conference proceedings.”

- Engineering Village Compendex Content Policy and Selection (A checklist of 13 criteria)
WHAT IS YOUR TOPIC AND KEYWORDS?

SHARE IN THE COLLABORATIVE DOCUMENT (ACTIVITY 1)
LET'S EXPLORE ENGINEERING VILLAGE

SHARE IN THE COLLABORATIVE DOCUMENT (ACTIVITY 2)
Key Concepts

Electronic waste
Recycling
Guiyu

Synonyms

E-waste
Reuse, management
Guangdong, China

WHAT ARE THE SEARCH OPTIONS?

Search can be built up from a simple one to a complex one, allowing the combination of many keywords or concepts.

Sample Topic:

How does electronic waste recycling affect citizens living in Guiyu, China?
HOW TO COMBINE SEARCH TERMS

Make use of AND, OR, NOT to combine ideas and synonyms together in a single search.

- **AND**: This is usually the default setting. AND is used to combine ideas together.
- **OR**: Use OR to combine synonyms.
- **NOT**: If the main idea has a common use you want to exclude, use NOT to exclude that word.
Environmental impact and human exposure to PCBs in Guiyu, an electronic waste recycling site in China

Xing, Guan Hua 1, 2; Chan, Janet Kit Yan 1, 2; Leung, Anna Oi Wah 1, 2; Wu, Sheng Chun 1, 2; Wong, M.H. 1, 2


Main heading: Printed circuit boards

Controlled terms: Electronic equipment - Electronic Waste - Fish - Organic pollutants - Polychlorinated biphenyls - Recycling - Risk assessment - Wastes

Uncontrolled terms: Chlorinated biphenyls - Correlation analysis - Dietary exposure - Electronic waste recycling - Environmental media - Inhalation exposure - Polychlorinated biphenyl (PCBs) - Residential areas

HOW IS THE CONTENT ORGANIZED?

Every article is displayed with rich metadata, including careful indexing of subject matters.
“Controlled terms” help identify synonyms and related terms.

- Makes searching more precise
- Helps understand hierarchy of topics
- Discover other broader, narrower, or related terms
HOW TO HANDLE VARIATIONS OF WORDS?

**Autostemming**

management ➔ manage, managed, manager, managers, managing, management, etc.

**Truncation**

col*r ➔ color, colour

h*emoglobin ➔ hemoglobin, haemoglobin, hemimethemoglobin

*sorption ➔ adsorption, absorption, desorption, resorption

comput* ➔ computers, computing, computerize, etc.

Autostemming is turned on by default in Engineering Village.

Truncation can be used if autostemming is not sufficient.
HOW TO SEARCH MULTIPLE WORDS TOGETHER?

Search for exact phrases using quotation marks or curly brackets to reduce the number of results.

`electronic waste`  
(69,065 results)

“electronic waste”  
(7,631 results)

{electronic waste}  
(7,631 results)
WHEN TO USE EXPERT SEARCH?

When there is a need to search within specific fields that are not available in Quick Search (e.g. conference code, funding number)

\[(ICTC \text{ WN CF}) \text{ AND (smart NEAR phone)}\]

Within Conference information

The two search terms are near to each other in any order

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<tbody>
<tr>
<td>AB = Abstract (c,i,g)</td>
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<tr>
<td>ACT = Access type (c)</td>
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<td>AN = Accession number (c,i,g)</td>
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<tr>
<td>AF = Affiliation/Assignee (c,i,g)</td>
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<tr>
<td>ALL = All fields (c,i,g)</td>
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<tr>
<td>AI = Astronomical indexing (i)</td>
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<tr>
<td>AU = Author/Inventor (c,i,g)</td>
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<tr>
<td>CI = Chemical indexing (i)</td>
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<td>CL = Classification code (c,i,g)</td>
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<th>Code = Field</th>
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<td>SU = Issue (c,i,g)</td>
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<td>LA = Language (c,i,g)</td>
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<td>MI = Material identity number (i)</td>
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<td>NU = see Numerical Data Codes (c,i)</td>
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<tr>
<td>NI = Numerical indexing (i)</td>
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<td>OC = Original classification code (i)</td>
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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.

“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.
INTERLIBRARY LOAN

• If Concordia Library doesn’t have it, use Interlibrary Loan

• Takes a few days or longer to process depending on the item
TRACK RESEARCH
BIBLIOMETRICS AND RESEARCH IMPACT
WHAT IS THIS ABOUT?

This goes beyond just searching for literature, but determining the research performance of an article, a journal, a researcher, an institution…

Answer questions such as:

- What is the citation count of an article?
- What is the impact factor of a journal?
- What is the h-index of a researcher?
- What are other options to assess research impact other than citations?
STAY ORGANIZED

MANAGE DOCUMENTS, CITATIONS, AND REFERENCES
SOME ADVICE

• Keep track from the beginning
• Doing it right conveys professionalism and quality
• Make use of a tool such as Zotero to help organize and save time
• Always double check citations and references that were automatically generated
• Consult a librarian if unsure
DO YOU USE A REFERENCE MANAGER?

RAISE YOUR HAND IF YOU USE ONE
ZOTERO

- Manage and organize sources in one place
- Save references/sources from the web browser
- Generate in-text citations and prepare the reference list automatically via a Word plugin
Subject guides are available for all schools, including one for Engineering and Computer Science.

General guides cover various topics from open access journals to annotated bibliography.
ASK A LIBRARIAN

Contact the library via email, chat, phone, or Zoom.

Contact your subject librarian (that’s me!)
USEFUL LINKS

• Engineering and Computer Science Subject Guide

• User guide for Sofia

• How to set up Google Scholar to find resources available at Concordia

• Compendex (via Engineering Village)

• Engineering Village Help

• IEEE Xplore

• Interlibrary Loan

• Bibliometrics and Research Impact Guide

• Concordia Library Standards Collection

• IEEE Citation Style

• Library’s Zotero Guide
QUESTIONS?