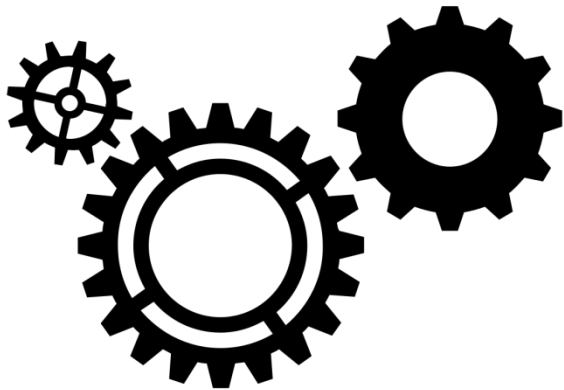
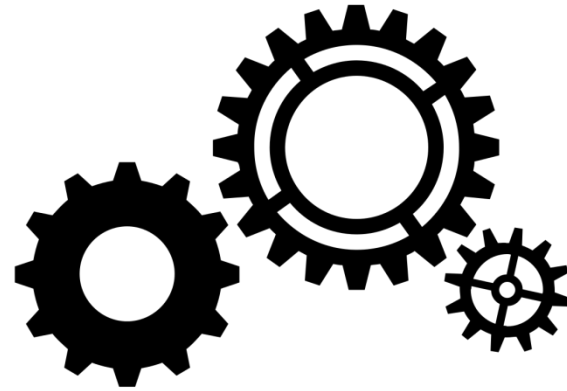


MSE 101W  
Break the Google  
addiction!



Holly Hendrigan <[hah1@sfu.ca](mailto:hah1@sfu.ca)>  
Applied Sciences Librarian,  
SFU Surrey

# Checking in

Have you had an SFU Library research session before?

**(A)** Yes

**(B)** No



# The plan

- New market metaphor
- Information Literacy!
- Real time search mishaps!
- Possible strategy
  - Encyclopedias
  - Books
  - Articles
- Research Don'ts

Fill up your eco-friendly shopping bag with resources from many different vendors



Source: *Vancouver Sun*

# Or, the Richmond Night Market



@richmondnightmarket/Instagram



“Google has had the largest influence on undergraduate research habits, so much so that it is the major impediment for them understanding library information structures and engaging with the scholarly literature in a meaningful way.” *(Bloom & Derup, "The SHU Research Logs: Student Online Search Behaviors Trans-scripted")*

# Map: MSE 101W guide

**Library** A-Z DIRECTORY SIGN IN  This site  SFU.ca

FIND HELP BORROW FACILITIES ABOUT

**Library Search**

**Mechatronics resources**


- Home
- Books + articles
- Background information
- Citing + writing
- Additional resources

[Home](#) / [Help](#) / [Research assistance](#) / [Subject + course](#) / [Mechatronic Systems Engineering](#)

## MSE 101W: Library research guide



**On this page**

- [Academic Encyclopedias](#)
- [Books](#)
- [Articles](#)
- [Search strategies & tips](#)
- [Popular vs. scholarly publications](#)
- [Mini literature review](#)
- [Citing sources](#)



This web page is intended to help you with your MSE 101W assignments. Also refer to the research guides for [Mechatronics](#), [Computing Science](#) and [Engineering Science](#) for general information. Start early so you can get the information and assistance you need.

If you need help, please contact Holly Hendrigan, Liaison Librarian, Faculty of Applied Sciences at 778.782.8023 or [holly\\_hendrigan@sfu.ca](mailto:holly_hendrigan@sfu.ca) or [Ask a librarian](#).

Slides from the [Library Research Workshop](#)  and the session on [Academic Integrity + Citing Sources](#) .

Technology  
+  
Social / Environmental /  
Ethical dimension







ABC NEWS/NICK HAGGARTY

Scott Morrison taunted opposition MPs with a lump of coal in 2017

**"Don't be afraid. Don't be scared. It won't hurt you. It's coal"**

Robinson Meyer, *The Atlantic*, Jan 4, 2020

Australia is caught in a climate spiral. For the past few decades, the arid and affluent country of 25 million has padded out its economy—otherwise dominated by sandy beaches and a bustling service sector—by selling coal to the world. As the East Asian economies have grown, Australia has been all too happy to keep their lights on. ...

But now Australia is buckling under the conditions that its fossil fuels have helped bring about. Perhaps the two biggest kinds of climate calamity happening today have begun to afflict the continent.



# The challenge: How to research this topic for an academic paper

There is not shortage of information on this topic on the open web (ie, doing a Google search).

**What is wrong with using Wikipedia, or reputable news sources such as BBC or CBC or The Guardian?**

Answer: Because you're in university, and you have (mainly) use **academic sources**

Full explanation lies in the *ACRL Framework for Information Literacy*, which organizes information literacy into 6 knowledge domains, or "Frames."

Frame: Authority is constructed and contextual

Information resources reflect their **creators' expertise and credibility**, and are evaluated based on the information need and the **context** in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required.

# Frame: Scholarship as Conversation

Communities of scholars, researchers, or professionals engage in **sustained discourse** with new insights and discoveries occurring over time as a result of varied perspectives and interpretations.

YOU are engaging in the conversation--with  
your community, who are academics

Which means you have to listen to them (and by listen, I mean read  
and cite)





After academics bring you up to speed on the topic, it's your turn you speak up. Join the conversation.

What's your take?

# Academic encyclopedias

- Alternative to “foraging”:  
**chaining** strategy
- follow references from one article as a starting point
- often obtained through literature searches or colleagues



# “Coal” articles

- *Encyclopedia of Industries*
  - *Encyclopedia of Energy*
  - *Encyclopedia of Climate Change*
  - *Environmental Science*
- 
- Currency: be aware of but not main criteria for evaluation
  - Pay attention to **sources**
  - **Your citations=your community**

# A Tale of Two Bibliographies: who is cited?

**“Mining, Coal: NAICS 2121”** in *Encyclopedia of Industries*

**“Coal”** in *Climate Change: In Context*

# Chaining activity

Reference in bibliography:

Caldeira, Ken. "Climate Sensitivity Uncertainty and the Need for Energy Without CO<sub>2</sub> Emission." *Science* 299 (2003): 2052-2054.

- How do you access?
- Who has cited?

# Google Scholar

The image shows a Google Scholar search interface. At the top, the Google Scholar logo is on the left, and a search bar contains the text "Climate Sensitivity Uncertainty and the Need for Energy Without CO2 Emission" with a magnifying glass icon on the right. Below the search bar, the word "Articles" is displayed with a blue arrow icon. On the left side, there are filters for "Any time" (with sub-options: "Since 2020", "Since 2019", "Since 2016", "Custom range..."), "Sort by relevance" (with sub-option: "Sort by date"), and a checked checkbox for "include patents". The main search result is for the article "Climate sensitivity uncertainty and the need for energy without CO2 emission" by K Caldeira, AK Jain, and MI Hoffert, published in Science in 2003. The article's abstract is partially visible. Below the abstract, there are icons for a star, a document, and a link, followed by the text "Cited by 334", "Related articles", "All 16 versions", and "Web of Science: 170". The text "Showing the best result for this search. See all results" is at the bottom.

Google Scholar

"Climate Sensitivity Uncertainty and the Need for Energy Without CO2 Emission"

Articles

Any time

- Since 2020
- Since 2019
- Since 2016
- Custom range...

Sort by relevance

- Sort by date

include patents

**Climate sensitivity uncertainty and the need for energy without CO2 emission**

[K Caldeira](#), [AK Jain](#), [MI Hoffert](#) - *Science*, 2003 - [science.sciencemag.org](http://science.sciencemag.org)

The UN Framework Convention on Climate Change calls for "stabilization of greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system." Even if we could determine a "safe" level of interference in the climate system, the sensitivity of global mean temperature to increasing atmospheric CO<sub>2</sub> is known perhaps only to a factor of three or less. Here we show how a factor of three uncertainty in climate sensitivity introduces even greater uncertainty in allowable increases in atmospheric ...

☆ Cited by 334 Related articles All 16 versions Web of Science: 170

Showing the best result for this search. [See all results](#)

# Books / Library catalogue

- Allow you to continue defining and refining your topic
  - Provide historical context
  - Provides useful bibliographies
- 
- Library catalogue records: provide subject headings

[FIND](#)[HELP](#)[BORROW](#)[FACILITIES](#)[ABOUT](#)

## Top links

[Renew items / My library account](#)[Article databases](#)[Citation + style guides](#)[Group study rooms](#)[Course reserves](#)[A-Z journals list](#)[Ask a librarian](#)

## Hours

[more →](#)

Bennett Library (Burnaby)  
OPEN  
until 11:45pm

Belzberg Library (Vancouver)  
OPEN  
until 10:00pm

Fraser Library (Surrey)  
OPEN  
until 9:00pm

donate  
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## Search the Library

[Library Search](#)[Catalogue Search](#)

## Features



# SPRING 2018

STUDENT  
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Up your academic game this spring with the SLC

Brush up on your writing, learning and study skills, or English with the Student Learning Commons this spring!

[LEARN MORE →](#)



search **coal australia** in Library Search.

5 bizarre results and this book:

The long goodbye : coal, coral and Australia's climate deadlock

What misgivings do you have with citing this book?

But how can we use this book to find something better?



BOOK  
The long goodbye : coal, coral and [Australia's climate deadlock](#) / Anna Krien ; correspondents, Anne Aly [and six others].

Anna Krien author Anne Aly contributor.  
Carlton, Victoria : Black Inc 2017

[Online access](#) >

TOP

SEND TO

VIEW IT

DETAILS

LINKS

Send to



E-MAIL



PRINT



CITATION



PERMALINK



MENDELEY



ENDNOTE



EXPORT CITATION



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Full text available at: [Ebook Central Academic Complete](#)

SHOW LICENSE

Public notes:

Full text - unlimited user access. Leased collection. Future access is not guaranteed.

Details

**Title** The long goodbye : coal, coral and [Australia's climate deadlock](#) / Anna Krien ; correspondents, Anne Aly [and six others].

**Author** Anna Krien author >

[Anne Aly contributor.](#) >

**Subjects** [Climatic changes -- Australia](#) >

[Electronic books](#) >

**Description** Description based on online resource; title from PDF title page (ebrary, viewed July 12, 2017).

**Related Titles** Series: [Quarterly Essay ; Issue 66](#) >

**Publisher** Carlton, Victoria : Black Inc

**Creation Date** 2017

**Format** 1 online resource (105 pages).

**Language** English

**Identifier** ISBN : 1-925435-73-3

**Source** 01SFUL\_ALMA

# Click on subject heading to get similar titles

- Limit to **books** as resource type

The screenshot shows a library search results page. On the left is a sidebar for refining results, and on the right is a list of search results. A blue circle highlights the entry for 'Sustainable energy solutions for climate change'.

**Refine results**

- Expand results beyond Library collection
- Sort by Relevance ▾
- Availability ▲
  - Full Text Online (1)
  - Physical copies available in the Library (6)
  - Open Access
- Resource Type ▲
  - Books (15)
- Library ▾
- Location ▾
- Subject ▾
- Author/Creator ▾
- Date ▾
- Language ▾
- Collection ▾

0 selected PAGE 1 15 Results Personalize

1 Drought, risk management, and policy : decision making under uncertainty / edited by Linda Courtenay Botterill and Geoff Cockfield.  
Linda Courtenay Botterill; Geoff Cockfield  
Boca Raton : CRC Press 2013  
[Online access >](#)

8 BOOK  
Applied studies in climate adaptation / edited by Jean P. Palutikof [and three others].  
J. P. Palutikof editor.  
West Sussex, England : John Wiley & Sons Ltd 2015  
[Online access >](#)

7 BOOK  
Managing climate change papers from the Greenhouse 2009 conference / [edited by] Imogen Jubb, Paul Holper and Wenju Cai.  
Greenhouse 2009 Corporate Author ; Greenhouse 2009 (2009 : Perth, W.A.) Imogen Jubb; Paul Holper 1957-; Wenju Cai; Greenhouse 2009  
Collingwood, Vic. : CSIRO Pub. c2010  
[Online access >](#)

8 BOOK  
Sustainable energy solutions for climate change / Mark Diesendorf.  
Mark Diesendorf  
Sydney : UNSW Press 2013  
[Online access >](#)

9 BOOK  
Responding to climate change : lessons from an Australian hotspot / editor, Paul Burton.  
Paul Burton editor.  
Collingwood, Victoria : Csiro Publishing 2014  
[Online access >](#)

10 MULTIPLE VERSIONS  
Troubled waters : confronting the water crisis in Australia's cities / edited by Patrick Troy.  
Patrick Nicol Troy editor.  
[2 versions of this record exist. See all versions >](#)

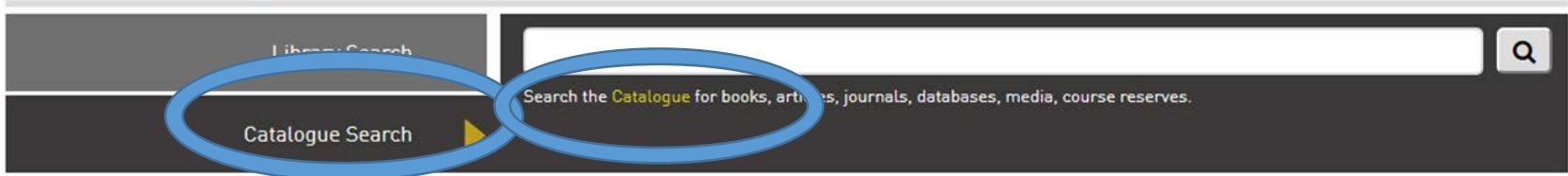
Pro-tip: “I just want to find a book!”

Do we own the book “Sustainable Fossil Fuels:  
The Unusual Suspect in the Quest for Clean and  
Enduring Energy?”

I don't want to read a review of the book or an article that contains  
the same words

## 1. Library Homepage

### Search the Library



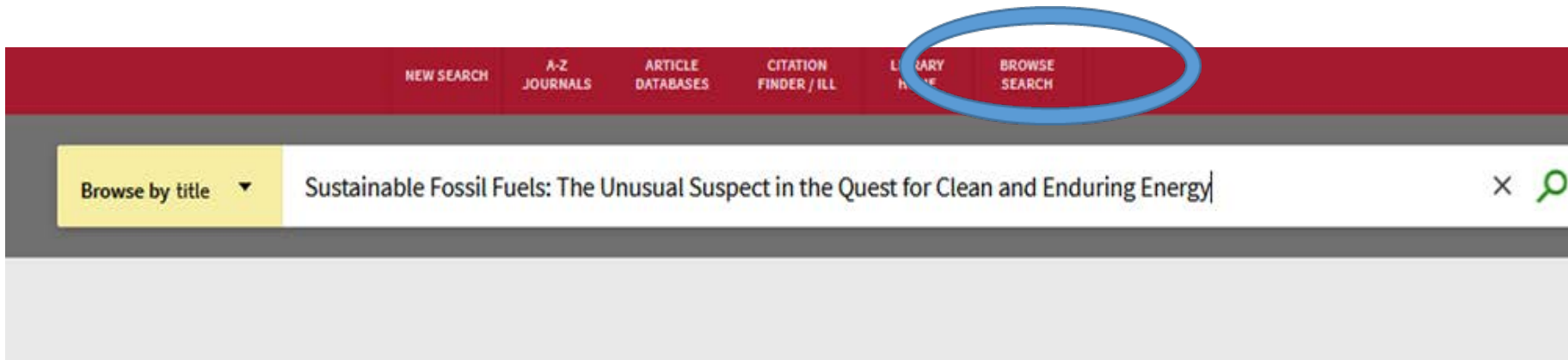
Library Search

Catalogue Search

Search the **Catalogue** for books, articles, journals, databases, media, course reserves.

The image shows a search bar on a library homepage. The text "Library Search" is partially visible above the search input field. Below the search bar, the text "Catalogue Search" is highlighted with a blue circle. The search bar itself contains the text "Search the Catalogue for books, articles, journals, databases, media, course reserves." and a magnifying glass icon on the right. Another blue circle highlights the search bar area.

## 2. Books/Media only



NEW SEARCH A-Z JOURNALS ARTICLE DATABASES CITATION FINDER / ILL LIBRARY HOME BROWSE SEARCH

Browse by title

Sustainable Fossil Fuels: The Unusual Suspect in the Quest for Clean and Enduring Energy

The image shows a navigation bar with several menu items: "NEW SEARCH", "A-Z JOURNALS", "ARTICLE DATABASES", "CITATION FINDER / ILL", "LIBRARY HOME", and "BROWSE SEARCH". The "BROWSE SEARCH" item is highlighted with a blue circle. Below the navigation bar is a search bar with a dropdown menu set to "Browse by title" and the search text "Sustainable Fossil Fuels: The Unusual Suspect in the Quest for Clean and Enduring Energy". There is a magnifying glass icon and a close button on the right side of the search bar.

# Journal articles

- Often, results of experiments
- Authors of journal articles are faculty members at universities
  - Magazine / newspaper articles: authors are professional writers
- Peer review process: multiple revisions
- Subject databases are an efficient way of searching journals on the same topic (eg, engineering, environmental science, psychology, business)

# Composing a search string

- Problem 1: overuse of natural language
- Problem 2: overuse of search strings without Boolean operators

Database: Academic Search

Research Question:

what is the association between coal mining and the wildfires in Australia?



# Natural language vs controlled vocabulary

Search A: "What is the association between coal and the wildfires in Australia? "

Note: Your initial search query did not yield any results. However, using SmartText Searching, results were found based on your keywords.

Results: garbage

# Instead

- Try: coal AND australia AND wildfires
  - Boolean operator AND narrows search to include documents with that include both concepts

# FAIL

Try: coal AND australia AND climate change

# Activity 2: Search

How would you approach this topic?

- Which places you looked
  - Circle the best one
- Terms you used
  - Circle the best terms

# Research activity: How to approach this topic?

## Canada's 5G network: Should Canada award the contract to Huawei?



# What else is on the MSE 101 guide?

- Resources for search strategies
- Evaluating sources
- Formatting your literature review
- Citing: links to IEEE and APA guides

On this page
<a href="#">Academic Encyclopedias</a>
<a href="#">Books</a>
<a href="#">Articles</a>
<a href="#">Search strategies &amp; tips</a>
<a href="#">Evaluating resources</a>
<a href="#">Mini literature review</a>
<a href="#">Citing sources</a>



# References

Association of College & Research Librarians. (2015, February 9). *Framework for Information Literacy for Higher Education*. Association of College & Research Libraries (ACRL).

<http://www.ala.org/acrl/standards/ilframework>

Bloom, B., & Deyrup, M. M. (2015). The SHU Research Logs: Student Online Search Behaviors Trans-scripted. *The Journal of Academic Librarianship*, 41(5), 593–601.

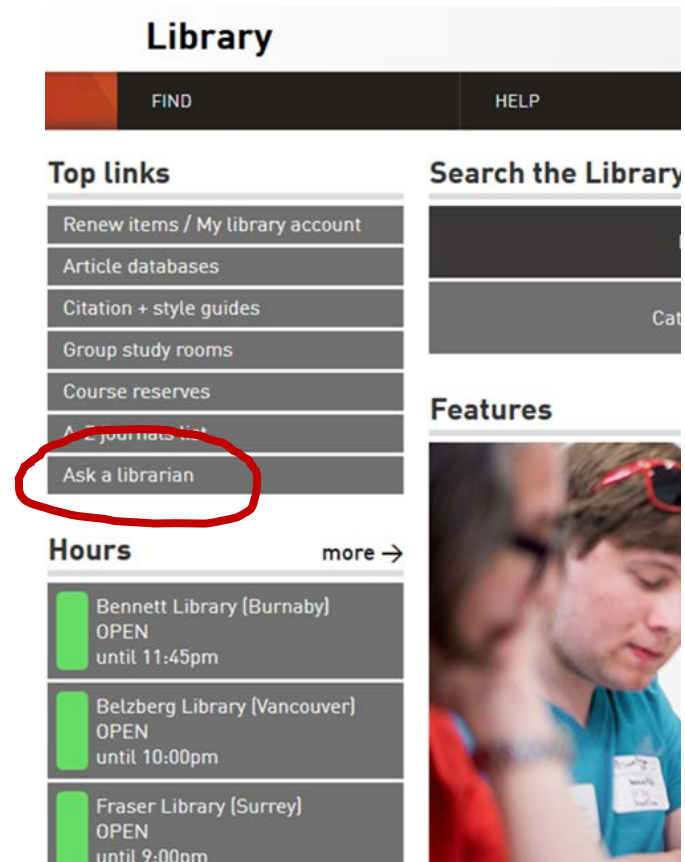
<https://doi.org/10.1016/j.acalib.2015.07.002>

Meyer, R. (2020, January 4). *Australia Will Lose to Climate Change*. The Atlantic

<https://www.theatlantic.com/science/archive/2020/01/australia-caught-climate-spiral/604423/>

# Getting help

- Book a consultation with me ([hah1@sfu.ca](mailto:hah1@sfu.ca))
- In-person at the reference desk
- Telephone
- Email
- IM
- Text message



The screenshot shows a library website interface. At the top, there is a navigation bar with 'Library' on the left, 'FIND' in the center, and 'HELP' on the right. Below this, there are two main columns. The left column is titled 'Top links' and contains a list of links: 'Renew items / My library account', 'Article databases', 'Citation + style guides', 'Group study rooms', 'Course reserves', 'All journals list', and 'Ask a librarian'. The 'Ask a librarian' link is circled in red. The right column is titled 'Search the Library' and contains a search bar. Below the search bar, there is a section titled 'Features' which includes a photograph of a person wearing a name tag and glasses.



What are your questions?