

## The Internet

You would learn how to effectively search for information online as well as how to evaluate the quality of online sources.

## Search Engines Rank Results According To Relevance

The screenshot shows a Google search for "James Tam". The search bar contains "James Tam" and the search button is visible. The results are displayed under the "Web" tab, showing 10 results out of approximately 16,600 found in 0.06 seconds. The results include:

- The faculty home page of James Tam**: The faculty home page of James Tam. Contact information. Office: Email: Phone: ICT 707. tamj@cpsc.ucalgary.ca (403) 210-9455 ...
- The Scripps Research Institute - Faculty**: Faculty, James Tam, PROFESSOR CHEMISTRY TSRI - 2005, Education: B.S., Chemistry, University of Wisconsin Ph.D., Medicinal Chemistry, University of ...
- A little bit about James Tam!**: James Tam: My interests and the major parts of my life. I've been working as a full time faculty member for the Computer Science department since August ...
- James Tam**: James Tam arrived in Toronto in 1972 and soon after took up martial arts in Karate under Sensei T. Masuko, who was 3rd dan and head of the Genwakai school ...
- LinkedIn: James Tam**: James Tam's professional profile on LinkedIn. LinkedIn is a networking tool that helps users like James Tam discover inside connections to recommended job ...
- DBLP: James Tam**: James Tam. List of publications from the DBLP Bibliography Server - FAQ ... 3: EE, James Tam, Saul Greenberg: A framework for asynchronous change awareness ...
- DBLP: Wa James Tam**: Wa James Tam. List of publications from the DBLP Bibliography Server - FAQ ... 4: Liang Zhang, Wa James Tam, Demin Wang: Stereoscopic image generation ...
- "WA James Tam" on Find Articles**: Find Articles results for "WA James Tam" ... Canadian Journal of Experimental Psychology, 37:198 by WA James Tam. More from publication: Save ...
- E A James Tam on Find Articles**: Find Articles results for EA James Tam. findarticles.com/p/search?b=art&t=%22W+A+James+Tam%22 - 26k -

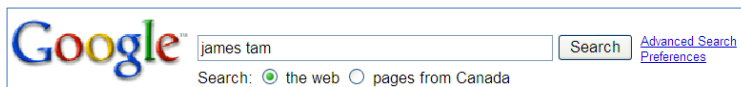
## Making A Site More Noticeable (Higher Rank)

- Search database built via search spiders (e.g., Google):
  - Add relevant keywords to your page.
  - The frequency and location of keywords may play a role in determining relevance.
  - Links (to your site) also affect ranking
  - Trying to artificially rank your page higher in search results may result in a page being put at the bottom of the list e.g., adding celebrity ‘gossip’ to my CPSC page may rank it higher but not relevant info for most visitors.
- Search databases built via human researchers (e.g., Yahoo):
  - Make sure that your site is examined by the people who build the database.



## Searching For Information On The Internet: Google

- Easy? Just type in what you’re searching for...



- ...you may get the information that you were looking for plus much more!



## You Will Learn Strategies For Narrowing Your Search Results (For Google But Largely Applies To Others):

1. Reducing the number of unrelated results.
2. Explicitly avoiding pages with certain words.
3. Searching for information from select pages.

Source (last accessed 2009): <http://www.google.com/support/websearch> and <http://www.googleguide.com>

## Employing These Search Strategies

- Many (but not all) of the features can be found through an “Advanced Search” subpage of the Google site.
  - [http://www.google.com/advanced\\_search](http://www.google.com/advanced_search)
- This leads you to a page with several options (to be covered shortly):

The screenshot shows the Google Advanced Search interface. It is divided into two main sections: "Find pages with..." and "Then narrow your results by...".

**Find pages with...**

- all these words: [input field]
- this exact word or phrase: [input field]
- any of these words: [input field]
- none of these words: [input field]
- numbers ranging from: [input field] to [input field]

**Then narrow your results by...**

- language: [any language]
- region: [any region]
- last update: [anytime]
- site or domain: [input field]
- terms appearing: [anywhere in the page]
- SafeSearch: [Show most relevant results]
- reading level: [no reading level displayed]
- file type: [any format]
- image rights: [not filtered by license]

## Searching For Exact Phrases

- Sometimes you may be looking for information about a famous quote.
  - “This was their finest hour!” – Winston Churchill

A screenshot of a Google search interface. The search bar contains the text "this was their finest hour". Below the search bar, it says "Search: the web pages from Canada". The results section shows "Results 1 - 10 of about 1,010,000 for 'this was their finest hour'. (0.05 seconds)". The first result is "This was their finest hour - Wikipedia, the free encyclopedia". Other results include "Winston Churchill Speech - Their Finest Hour", "Audio: Winston Churchill's 'This Was Their Finest Hour' Speech", "Video results for this was their finest hour", and "Free MP3 Compilation: Best Of Netlabels: 'Their Finest Hour' Vol. 2 ...".

Many results must be reviewed.

Unrelated websites show up: *Their finest hour*

## Searching For Exact Phrases (2)

- Enclosing the phrase that you are searching for in **quotes** will search for pages that contain only that specific phrase.

A screenshot of a Google search interface. The search bar contains the text "this was their finest hour" enclosed in double quotes. Below the search bar, it says "Search: the web pages from Canada". The results section shows "Results 1 - 10 of about 13,300 for 'this was their finest hour'. (0.07 seconds)". The first result is "This was their finest hour - Wikipedia, the free encyclopedia". Other results include "Winston Churchill Speech - Their Finest Hour", "Audio: Winston Churchill's 'This Was Their Finest Hour' Speech", and "YouTube - Winston Churchill - This Was Their Finest Hour".

The desired phrased enclosed quotation marks.

Fewer but more relevant results show up

## Searching **Exact Phrases**: Advanced Search

**Advanced Search**

Find pages with...

all these words:

this exact word or phrase:  No other combinations are possible

any of these words:

none of these words:

numbers ranging from:  to

## Words That Are Commonly **Ignored By Google**

- **Stop words** are ignored by search engines such as Google:
  - **Common** words
  - **Reserved** words
- The search engine can be forced to **include the stop words**:
  1. Use **quotes**  
 best places to eat in Calgary  
 Vs.  
 “best places to eat in Calgary”
  2. Use the **‘plus’ operator**.  
 Star Wars I  
 Vs.  
 Star Wars +I

## What If **More Than One Word** Can Be Used?

- Some concepts can be represented by using different words.
- The '~' operator includes synonyms in the search.
- Example:
  - ~cheap computers

## The Search Criteria Is Incomplete/Partially Unknown

- For example, searching for information on this person:



Image: Koch/Munich Security Conference



Image: [www.cnn.com](http://www.cnn.com) (2015)

- How is his name spelled?
  - Arnold Swartzengger?
  - Arnold Schwartzenger?
  - Arnald Swartzencker?
- FYI it's "Arnold Schwarzenegger"
- **Note: many search engines try to 'guess' what you are thinking but sometimes software guesses wrong (think of "auto correct" on mobiles)**
- **Also handy for less common words and phrases e.g., technical terms, foreign languages translated to English**

## Using The Wildcard In Searches

The screenshot shows a Google search interface. The search bar contains the text "arnold schw\*" which is circled in red. Below the search bar, there are radio buttons for "the web" (selected) and "pages from Canada". The search results are displayed under the heading "Web".

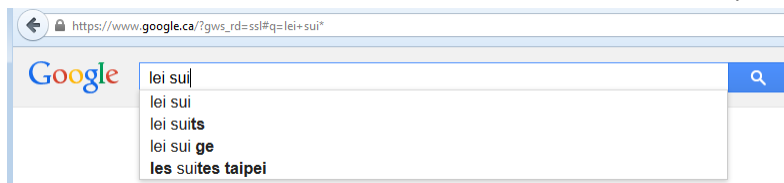
**[PDF] Page 1 2-19.pub**  
 File Format: PDF/Adobe Acrobat - [View as HTML](#)  
 26 **Arnold Schwar-** zenegger, R, governor of California .... Tue., Feb. 27, Janet Napolitano,  
 ... **Arnold Schwar-** zenegger, R, will speak at a Club ...  
[npc.press.org/about/record/2007/2-19-07Record.pdf](http://npc.press.org/about/record/2007/2-19-07Record.pdf) - [Similar pages](#)

**[PDF] BUSINESS**  
 File Format: PDF/Adobe Acrobat - [View as HTML](#)  
**Arnold Schwar-** zenegger signed a "compact" providing for. modest increases in the  
 university budget. in exchange for commitments to make UC ...  
[www.universityofcalifornia.edu/news/dynesinterview0905.pdf](http://www.universityofcalifornia.edu/news/dynesinterview0905.pdf) - [Similar pages](#)

**[PDF] 1 2 SUPERIOR COURT OF CALIFORNIA COUNTY OF SACRAMENTO 10 11 ...**  
 File Format: PDF/Adobe Acrobat - [View as HTML](#)  
**ARNOLD SCHW ARZENEGGER,**. Governor, in his individual capacity;. GOVERNOR SCHW  
 ARZENEGGER'S. CALIFORNIA RECOVERY TEAM, a ...  
[www.fppc.ca.gov/legal/lit/citizensruling.pdf](http://www.fppc.ca.gov/legal/lit/citizensruling.pdf) - [Similar pages](#)

## Using The Wildcard

- Search engines such as Google have been refined to reduce but not entirely remove the need for wildcards.
- Google may not provide useful alternatives when searching for technical terms or foreign words translated into English
- Example: "Lei Sui, Lung" (English translation of the Chinese name of the famous martial artist/movie star: Bruce Lee)



## Searching A Range

- Searching numerical values within a certain min – max range
- Range operator .. (multiple dots)
- Example:
  - Qatar History 2000..2009
  - computer 2000 QR..5000 QR

## Range Searching: Advanced Search

Find pages with...

all these words:  ← Search criteria

this exact word or phrase:

any of these words:

none of these words:

numbers ranging from:  to  ← Numerical range

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## Searching Among Alternatives

- Normally when a word is included in the search box Google will try to find web pages that include **all** those words.
- Example:
  - (All words – Logical “AND”)
  - cute wallpapers cats dogs
  - Vs.
  - cute wallpapers cat OR dogs

### Example:

“Bruce Lee” OR “Little Dragon” OR “Lee Siu Lung”  
“Wayne Gretzky” OR “The Great One” OR Number 99” Or “Number ninety nine”

## Searching Among **Alternatives** (2)

Note: Google is case sensitive in this situation! (OR must be upper case in order to search for alternatives).

To be or not to be

Vs.

To be **OR** not to be

## Example: Multiple Search Terms (Default)

"bruce lee" "little dragon"

All Videos Images News Shopping More Search tools

About 125,000 results (0.45 seconds)

**Bruce Lee - Wikipedia**  
[https://en.wikipedia.org/wiki/Bruce\\_Lee](https://en.wikipedia.org/wiki/Bruce_Lee)  
 Lee Jun-fan known professionally as Bruce Lee, was a Hong Kong and American actor, martial ... a student name while he was attending La Salle College, and his Chinese screen name Li Xiaolong (李小龍; Xiaolong means "little dragon").  
 Cerebral edema · Filmography · Bruce Lee Library · The Legend of Bruce Lee

Images for "bruce lee" "little dragon" Report images

More images for "bruce lee" "little dragon"

**Little Dragon Tribute : Bruce Lee - YouTube**  
<https://www.youtube.com/watch?v=ioN3DBzFjmw>  
 Jul 2, 2007 · Uploaded by JetWahLee  
 Tribute music video with clips of the Founder and Master of Jeet Kune Do and his family. Soundtrack from the ...

**Bruce Lee: The Little Dragon Ryusei (Nunchaku Performance ...**  
<https://www.youtube.com/watch?v=s5ia-RGdVA>  
 Sep 15, 2015 · Uploaded by José Antonio  
 Awesome performance! You can feel Bruce Lee's split living on through this little warrior.

## Example: Multiple Search Terms ("OR")

"bruce lee" OR "little dragon"

All Images Videos News Books More Search tools

About 19,600,000 results (0.50 seconds)

**Bruce Lee - Wikipedia**  
[https://en.wikipedia.org/wiki/Bruce\\_Lee](https://en.wikipedia.org/wiki/Bruce_Lee)  
 Lee Jun-fan known professionally as Bruce Lee, was a Hong Kong and American actor, martial ... a student name while he was attending La Salle College, and his Chinese screen name Li Xiaolong (李小龍; Xiaolong means "little dragon").  
 Children: **Brandon Lee** (1965–93); **Shannon L...** Years active: 1950–1973  
 Origin: Hong Kong Parents: **Lee Hoi-chuen** (1901–65); Grace Ho ...

**Little Dragon - Wikipedia**  
[https://en.wikipedia.org/wiki/Little\\_Dragon](https://en.wikipedia.org/wiki/Little_Dragon)  
 Little Dragon are a Swedish electronic music band from Gothenburg, formed in 1996. The band consists of Yukimi Nagano (vocals, percussion), Erik Bodin ...  
 Genres: **Trip hop**; **downtempo**; **synthpop**; **indiet...** Members: **Yukimi Nagano**; **Erik Bodin**; **Fredrik ...**  
 Labels: **Off the Wall**; **Peacefrog**; **JVC Victor**; **Be...** Origin: **Gothenburg**, Sweden

**Bruce Lee (@brucelee) | Twitter**  
<https://twitter.com/brucelee>

3 hours ago - [View on Twitter](#)

Here's how my father (Bruce Lee) continues to inspire me and others to innovate. Article I wrote for @FastCompany [bit.ly/2g72F0q](http://bit.ly/2g72F0q)

2 days ago - [View on Twitter](#)

Ok, Y'all! 12 hours left for some great deals in the Bruce Lee Store - [bit.ly/CBMON](http://bit.ly/CBMON)  
[pic.twitter.com/xSmoibEBG...](http://pic.twitter.com/xSmoibEBG...)

## Example: Multiple Search Terms, OR - No Caps

The screenshot shows a Google search interface with the query "bruce lee" or "little dragon" entered in the search bar. The search results are categorized under "All" and show approximately 125,000 results in 0.97 seconds. The top results include:

- Bruce Lee - Wikipedia**: A link to the Wikipedia page for Bruce Lee, with a brief description of his life and career.
- Little Dragon Tribute : Bruce Lee - YouTube**: A link to a YouTube video tribute to Bruce Lee, uploaded by JetWahLee on July 2, 2007.

Below the text results, there is a section titled "Images for 'bruce lee' or 'little dragon'" which displays a row of six small image thumbnails related to Bruce Lee.

## Searching **Alternatives**: Advanced Search

Find web pages that have...

all these words:

this exact wording or phrase:

one or more of these words:  OR  OR

But don't show pages that have...

any of these unwanted words:

Need more tools?

Results per page:

Language:

File type:

Search within a site or domain:

(e.g. youtube.com, .edu)

[Data, usage rights, numeric range, and more](#)

All words  
that must  
appear

One of  
more of  
these  
words can  
appear

## Using 'OR': Exceptions<sup>1</sup>

- Google was designed to approximate how people think and behave when searching for information.
- Consequently exceptions to the rules are sometimes made.
- Example<sup>2</sup>:
  - What you tell the search engine: "For better" **OR** "for worse"
  - What the search engine looks for: "For better **or** for worse"

<sup>1</sup> From <http://www.google.com/support/websearch>

<sup>2</sup> Google and other search engines may automatically assume you are looking for the Lynn Johnson comic strip (<https://www.fhorfy.com/>) when you enter this phrase.

## Excluding Words

- There may be times when you want Google to exclude sites with certain words or phrases.
- This can be done with the **subtraction operator** (subtract the words that follow the operator from search results).
- Example:
  - "James Tam"
  - Vs.
  - "James Tam" -calgary

## Excluding Words: Advanced Search

Find pages with...

all these words:

this exact word or phrase:

any of these words:

none of these words:

numbers ranging from:

 to 

Exact  
search  
phrase

Excluded  
word

## Site Specific Searches

- Useful when a webpage is large and/or not well organized:
  - Searching the current webpage
  - Searching the entire site (and only that site)

## Searching The Currently Viewed Web Page



The screenshot shows a web browser window displaying the University of Calgary Computer Science website. A search dialog box is open, showing the search term 'courses'. The website content includes a navigation menu on the left with links for Home, Faculty & Staff, Research, Graduate Studies, Undergrad Studies, Courses, Site Map, and Faculty Positions. The main content area features a 'Welcome!' message and a list of links for 'Ac' and 'Pr'. The search dialog box is positioned over the text 'courses' in the 'Ac' link.

## Searching One Website

- Involves searching one entire site (and *not just the page* from the site that is currently loaded into the web browser). Results from other sites will not be shown.
  - Use the **'site'** keyword

- Example:

Search only the University of Calgary website for the desired text

"vba" site:www.ucalgary.ca

Results are only from the University of Calgary website

[MSOffice update | News & Events | University of Calgary](#)

[www.ucalgary.ca/news/utoday/jan20-09/MSOffice](http://www.ucalgary.ca/news/utoday/jan20-09/MSOffice)

Jan 20, 2009 - These include: Excel Levels 1,2,3, and Excel Macros and VBA; Word 1, 2, and 3; PowerPoint 1 and 2; Access 1, 2, and Access Macros and VBA ...

[University of Calgary Continuing Education](#)

[www.ucalgary.ca/cted/campaign2013/201501-newsletter.html](http://www.ucalgary.ca/cted/campaign2013/201501-newsletter.html)

Microsoft Macros and VBA Level 1. Feb 4 ICT 427. Main Campus. Sketching Interiors Feb 4 INT 114. Main Campus. Procurement and Contract Management

[Co-op & Internship Employer Testimonials | Faculty of Science ...](#)

[www.ucalgary.ca/science/undergraduate/co\\_op\\_internship/employer\\_testimonials](http://www.ucalgary.ca/science/undergraduate/co_op_internship/employer_testimonials)

In return the students gain an enormous amount of knowledge in Oil & Gas, data management, learn many technologies that we use such as C/C++, VBA, ...

## Searching One Website: Advanced Search

Find pages with...

all these words:

this exact word or phrase:  ← Information sought

any of these words:

none of these words:

numbers ranging from:  to

---

Then narrow your results by...

language:

region:

last update:

site or domain:  ← Site being searched

## Finding And Evaluating Information

- This section is crafted for students who need to conduct research for an undergraduate course e.g., writing a paper
  - But the principles can be applied when researching information for personal reasons because it may improve the quality of the results (e.g., “Are there technical reasons why a MAC is any more or less secure than a Windows-PC?”)
- Finding: Where to look for information
- Evaluating: Determining the quality of information?

## Finding Information

- When conducting formal research (or even research for undergraduate courses) information sources should be evaluated for quality
  - Not all sources of information are equal in terms quality.
  - Contrast: a private individual's personal blog vs. a website containing the current research being conducted by the experts in a particular field.
- Where to start?
  - Check with your course instructor: what level of research is expected?
  - Journals and conference proceedings
  - Books
  - Online: websites

## Journals And Conference Proceedings

- Publications that describe the latest theories and research produced by domain experts
- The quality of publications can vary
  - First tier "prestigious" venues only containing the best or higher quality work publications:
  - Second tier "average" publications:
    - However in terms of undergraduate research the quality of papers produced at either category should be sufficient (check with your course instructor)
    - Which ones are at least reasonably good ones? Start with the instructor's publication list and look at the journals and conferences in which this person has published.
- Overall the quality of the information is generally good
- Since it is written by 'experts' for 'experts' it may be difficult for the typical student to read and understand



## Journals And Conference Proceedings (2)

- Examples (in case you're curious):
  - <http://www.sigchi.org/conferences/> "User-friendly technology"
  - <http://cscw.acm.org/2015/> "Technology to support groups"

## Books

- Books: First look at the intended audience
  - General population books: with no background knowledge in the domain?
    - e.g., "A brief history of time" by Stephen Hawking
    - Probably too rudimentary for use in post-secondary courses.
  - Students: high school or post-secondary
    - May be at an appropriate level of detail (for the latter category) if you just want general knowledge of a topic (e.g., instead of taking a course)
    - Probably not specialized enough if you need to write a paper for a course
    - e.g., you are taking CPSC 203 there is a brief hardware introduction but the introduction is probably not sufficient if you need to write a paper on the specific hardware needed for high-end gaming computers

## Online: Websites

- Even more than the other sources, websites vary greatly in quality
  - The publishers of conference may host websites describing the latest research conducted by the experts
  - On the other hand: anyone can make their own website about a particular topic
- Some things to keep in mind when evaluating the quality of a website:
  - Who is the author:
    - Widely regarded expert in the field
    - Industry expert (which field, is it similar to the one described in the website)
    - Does the person have any apparent conflicts or agendas e.g., a CEO of a computer manufacturing company writing a review of laptops (sometimes affiliations are not so obvious)
    - Are points backed by facts? Are those facts citing reputable sources?
      - Some present opinions as facts.

## Online: Websites (2)

- Who is the intended audience of the website:
  - Expert researchers?
  - General population?
  - Combination? E.g., [www.mayoclinic.org](http://www.mayoclinic.org), <http://www.hopkinsmedicine.org>
- If the content is produced by a university or reputable research group then it's probably *correct*
  - E.g., Mayo clinic, Johns Hopkins
  - But may or may not be targeted specifically to a 'general' audience and be of insufficient depth for your research
- In general use websites with a strong degree of a caution.

## Wikipedia

- “**Wikipedia** is a collaboratively edited, multilingual, free Internet encyclopedia...” – from [www.wikipedia.org](http://www.wikipedia.org)
- “Many eyes view it”
- Q: Is this a good quality source of information when researching a topic?

## Wikipedia (2)

- Many ‘eyes’ view but are those the ‘right eyes’
  - Some topics require expert knowledge e.g., ‘Rocket science’
- There is no guarantee that the experts in the area will be viewing, let alone actively editing Wikipedia documents
- Furthermore the document that you view one day may not be the same one that you view on another day
  - Actively study the history of changes of a document and compare differences?
- Subject to bias - extreme cases of “vandalism” has lead to “lock downs”
  - Yes files can be secured from further edits but consider what’s the point of a wiki (anyone on the web can edit)

## Using Wikipedia

- Similar to regular paper encyclopedia or perhaps a newspaper article it's a distillation of different sources of information.
  - Generally it is not accepted as a direct primary source (don't directly cite a Wikipedia article in your research paper).
- It may be a starting point to find good sources of information that can directly be cited.
- Example: "Human-Computer interaction"

### Footnotes [\[edit\]](#)

1. <sup>^</sup> Card, Stuart K.; Thomas P. Moran; Allen Newell (July 1980). "The keystroke-level model for user performance time with interactive systems". *Communications of the ACM* **23** (7): 396–410. doi:10.1145/358886.358895 [↗](#).
2. <sup>^</sup> Carlisle, James H. (June 1976). "Evaluating the impact of office automation on top management communication". *Proceedings of the June 7–10, 1976, National Computer Conference and Exposition*. pp. 611–616. doi:10.1145/1499799.1499885 [↗](#). "Use of 'human-computer interaction' appears in references"
3. <sup>^</sup> <sup>ⓘ</sup> <sup>Ⓘ</sup> <sup>Ⓞ</sup> Hewlett, Becker, Card, Carey, Gasen, Mantei, Perlman, Strong, Verplank. ["ACM SIGCHI Curricula for Human-Computer Interaction"](#) [↗](#) ACM SIGCHI. Retrieved 15 July 2014. [↗](#)

**Wikipedia cites a good research conference (usability "user friendly" technology)**

## Using The University Library



- Services provided for students:
  - From <http://library.ucalgary.ca/student-support>
  - "As a student attending the University of Calgary, you have access to the books, journals and [online resources](#) of a major research institution. [Your subject librarians](#) are available for [research assistance](#) as well.
  - Your University of Calgary [ONEcard](#) is your library card, and gives students the following privileges:
    - Borrowing books with a loan period of two weeks for undergraduate students and a term loan for graduate students
    - Interlibrary loan
    - Off-campus access to Library Research Databases"

## The University Library: Online Resources

- The publications of many journals and conference proceedings can be accessed “for free” (licensed) through the university portal:
  - Requires login with the UC login credentials.
  - Combine it with an online web search:
- Use regular search engines to find the relevant paper.
  - E.g., “Direct Stimulation of Angiotensin II Type 2 Receptor Initiated After Stroke Ameliorates Ischemic Brain Damage” – found via Google scholar
- Then access the content of the paper through the university portal

The screenshot shows the University Library website interface. At the top, there is a navigation bar with the word "Library" in a large font. Below it, a menu bar contains links: HOME, SEARCH COLLECTIONS, SERVICES, HOURS & LOCATIONS, ABOUT US, and GET HELP. The main content area is titled "ARTICLES & BOOK CHAPTERS" and displays search results for the article "Association of Nonmyeloablative Hematopoietic Stem Cell Transplantation With Neurological Disability in Patients With Relapsing-Remitting Multiple Sclerosis" by Arnaudovic, Indira; Spahovic, Dzemila; Quigley Kathleen; Oliveira, Maria Carolina; Futterer, S. The search results are displayed in a table with columns for the article title, authors, and publication details (JAMA Jan/2015, Volume 313, Issue 3, pp. 275 - 284). A search bar is visible at the top right of the page, containing the text "Association of nonmyeloablative hematopoietic stem cell transplantation with neuro".

## Authentication Is Require To Access The Article

The screenshot shows the "Library User Authentication" page. It is divided into two main sections. On the left, under the heading "SIGN IN with My UoIC", there is a "Central Authentication Service" login box with fields for "Username" and "Password". On the right, under the heading "OR SIGN IN WITH", there is a form for "IT username, Library Barcode or Continuing Education ID:" with a text input field containing "lam", a "Password:" field with masked characters, and a "Sign In" button. At the bottom right of the page, there are links for "Help" and "Terms of Service".

## Online Web Search Without The Library

- The general Internet user does not have a license to access many good online resources.
- After finding the publisher of the article: Journal of American Medical Association

**JAMA** [Visit the Site](#)

Single Article Purchase:

**Association of Nonmyeloablative Hematopoietic Stem Cell Transplantation With Neurological Disability in Patients With Relapsing-Remitting Multiple Sclerosis**

**Hematopoietic Stem Cell Transplantation for Multiple Sclerosis**

Burt RK, Balabanov R, Han X, et al.  
 JAMA. 2015;313(3):275-284.  
 Published online January 20, 2015

Select Pricing Criteria:

Location: **Canada**

Subscriber: **Other Profession**

Subscription: **24 Hour Access**

**\$30.00**

**ADD TO CART**

## After This Section You Should Now Know

- How do search engines build up a database of websites using spiders
- Some factors that can determine the ranking of search results

## After This Section You Should Now Know (2)

- Techniques for more effective web searches:
  - Searching for exact phrases: using quotes
  - How to include “stop words” in searches: quotes and the plus operator +
  - How to search for synonyms: ~
  - How to use the wildcard: \*
  - Benefits of the wildcard vs. relying on “suggested searches”
  - Searching ranges: . .
  - Searching for alternates: OR
  - Excluding words and phrases: - (subtraction operator)
  - Conducting site specific searches:
    - Finding content within the webpage currently viewed: ‘find in page’
    - Searching for content within a particular website: site

## After This Section You Should Now Know (3)

- Sources for researching information (journals/conferences, books, websites)
  - Strengths and weaknesses
  - How to evaluate their value
- How a website such as Wikipedia can and should not be used when conducting research
- How the university library can complement a web search (licensed access to online resources)