Web of Science

Take a Class

The Galter Library teaches a related class called Finding Cited References and Impact Factors. See our Classes schedule for the next available offering. If this class is not on our upcoming schedule, it is still available to you or your group by request.

What is Web of Science?

Produced by the Institute for Scientific Information (ISI) from Thomson Reuters, Web of Science is a suite of citation databases including Science Citation Index Expanded (1900-Present), Social Sciences Citation Index (1900-Present), and Arts & Humanities Citation Index (1975- Present). It also contains a database of conference proceedings and abstracts from 1990 to the present, a Science Book Citation Index which includes book chapter citation data from 2005 to the present and a Social Science & Humanities Book Citation Index that also covers 2005-Present. It contains citation and abstract information on articles in over 13,000 journals in the sciences, social sciences, and the humanities. All the indexes can be searched at the same time.

Web of Science is part of Web of Knowledge, a collection of databases from ISI. Northwestern’s subscription to Web of Knowledge also includes Journal Citation Reports which provides bibliometrics such as impact factors on journals from a wide variety of disciplines.

Accessing Web of Science

Web of Science can be accessed by clicking the Top Databases link in the Popular Links menu on the left side of the Galter Library home page. In the next page, click the Web of Science link to access the database. You will now see the Web of Science home search screen.
Types of Searches

In Web of Science, you can perform the following types of searches:

- **Basic Search**: topic, author, journal name, etc. - This is the default search in Web of Science. To select other types of searches, click the blue downward arrowhead next to Basic Search to access other search options. Use the drop-down menu to change the Basic Search from topic to other fields.
- **Author Search**
- **Cited Reference Search**: articles that cite an author or work
- **Advanced Search**: use field tags to construct complex searches
On this screen

- Choose a timespan to search (default is All Years)
- To change the set of literature searched, click the blue arrowhead next to More Settings, then
  - Uncheck citation databases you do not wish to include in your search (default is All Citation databases)

Basic Search
On this screen:

- Enter your search terms in the text box. Use asterisks (*) at the ends of words for truncation to allow for multiple word forms.
- Use the drop-down arrowhead in the box next to the text box to change from Topic to Author, Title and many other search field options
- If you want to search multiple fields, click the blue text link to Add Another Field
- When you have entered all your terms, click the Search button

**Author Search**

In Author Search, Web of Science Guides you through a series of steps to find a set of publications by a single author.
On this screen

- Enter the author's last name and first initial in the boxes provided. Last name is required.
- If there is a possibility that the author has been published using more than one variant of first and second initials, click the blue text link to Add Author Name Variant to create more lines for all possible author name combinations.
- You have the option to click a checkbox for Exact Matches Only, but this will restrict your search to only that combination of last name and initial(s).
- Click the button to Select Research Domain (alternately, you can click Finish Search).

Note: If you are searching for an author with a common last name such as Smith, Lee, Liu, etc., you will most likely want to use the options to specify research domain and organization in the next steps, to avoid an unmanageable number of results.
On this screen

- Click checkboxes next to broad Research Domains, or click the plus signs (+) next to a domain to expand the field and select subcategories in a domain
- You can select more than one domain, or all domains
- When you're done, click the Select Organization button (alternately, you can click Finish Search)

![Image of checkboxes and institutions]

On this screen

- Click checkboxes next to all the institutions with which your target author has been affiliated, if you know them. You can click more than one box.
- If you don't know all the institutions at which the author has been affiliated, don't click any checkboxes. This will result in selecting all possible institutions.
- Use the Back to top text links to go back to the top of the screen
- Click Finish Search to get your results

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Viewing Results and Marking Records
On this screen:

- **Refine** results by subject, document type, or other criteria
- **Sort** records by date, times cited, relevance, first author, or journal name
- For an author search, click the blue text link to view **Record Sets**, so you can fine-tune your author name search to capture publications by your target author.
- Mark records using the checkboxes next to record numbers for printing, saving, emailing, or exporting to reference management software such as EndNote.
- Access the full-text using the FindIt@NU button.
- Use the Analyze Results link to see records grouped by most common journal titles, authors and other options.
- Use the Create Citation Report link to view records ranked by most cited. For a single author search, the citation report will also give you the author's h-index.
- Click a title link to view its full record including abstract and keywords.
On this screen

- Access the full-text using the **FindIt@NU** button
- **Add to marked list** for future printing or exporting to EndNote or other bibliographic management software
- View a list of articles that have cited this paper by clicking **Times Cited**
- Create a citation alert to be notified when this paper is cited in the future
- View **related records** based on shared bibliographic references
- View the bibliography of this paper by selecting **Cited References**

### Printing, Saving, Exporting, and E-mailing Records

From the Results screen, in the upper right corner, click the **Marked List** button to access your marked records list.
On this screen

- Select the fields you would like to include in your output (Author, Title, and Source are included by default)
- Select an option for output: Format for Print, Save to File, Export to EndNote Online, EndNote or other reference software, or E-mail
- A list of your marked records is at the bottom of this page. You can remove any items from your marked list by clicking the red X next to any item.
- You can analyze the results or view a citation report for the marked list from this page
- Use the Clear Marked List button near the top right corner to clear all items from your marked list after you have downloaded or saved the results.

Citation Reports
The Citation Report provides aggregate citation statistics for a set of search results. These statistics include:

- The total number of times all items have been cited
- The average number of times an item has been cited
- The number of times an item has been cited each year
- The average number of times an item has been cited in a year

This is most useful when searching for publications by a specific author.

To access a Citation Report for a set of results, click the Create Citation Report link that appears near the top right of the Results page.

On this screen

- View graphs of published items per year and numbers of citations per year for your search terms
- View a sum of citations with and without self-citations. In Web of Science “self-citations” are citations within the same journal (e.g. Nature). They are not author self-citations.
- View average citations per item and remove items that are extreme outliers by clicking checkboxes next to their titles
Why Use Web of Science?

- Web of Science is a multidisciplinary database, so it may retrieve literature that may not be available in more specialized databases such as MEDLINE.
- Web of Science has Cited Reference Searching which allows users to retrieve the cited references of a chosen article or articles. You can find out how often a particular work or author has been cited in the literature.
- Web of Science allows easy access to data on the author h-index, an index of author impact.
- The database includes Journal Citation Reports, which enable browsing of journal impact factors by title or by discipline.

Cited Reference Searching

The Web of Science database indexes not only a particular article's citation information, but also records the article's bibliography. A document indexed within the citation database enables its historical origin (the cited references) to be examined and also to easily follow links through to its current position in the research literature (times cited). Cited reference searching allows you to find out who is citing your research, to track the research activities of known authors, and to follow the history of a topic from its genesis in the research literature to the present day.

To get to the Cited Reference Search, click the orange Search link near the upper left of the Web of Science screen.
Click the arrowhead next to **Basic Search** and click on **Cited Reference Search**

**On this screen**

- Enter information about the publication you wish to find
- Click **Search**
- If you receive a list of multiple results, individual article titles will not show. To display article titles, click the **Show Expanded Titles** link in the **Cited Work** column of your results.
Check the box beside the article or articles for which you would like to retrieve cited references. For a single article's result, click on the article title or on the Show Record links if you are not using expanded titles.

Click **Finish Search**

This search will retrieve articles that have cited the article(s) you specify.

The following related tutorial is available on the Web of Science website (turn up the volume of your speakers):

- **Cited Reference Searching** (7 mins.)

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**What is the H-index?**

The h-index is the statistic that currently may be the best measure of impact factor for single articles or for an author's body of work. It was developed and proposed by [J.E. Hirsch in 2005](#).

The h-index is calculated from your list of publication results ranked in descending order by the **Times Cited**. The value of \( h \) is equal to the number of papers (\( N \)) in your results list that have \( N \) or more citations. The h-index helps correct for the disproportionate weight of highly-cited papers or papers that have not yet been cited.

The h-index is based on your selected time span in your search. Items that do not appear on the **Results** pages will not be factored into the calculation. If your search covers 10 years, then the h-index value is based on this period even though a particular author may have published articles more than 10 years ago. The calculation only includes items in Web of Science - books and articles in journals that are not covered by Web of Science are not included.

To find the h-index for an author, run an author search as described above.

From the results, click the **Create Citation Report** link at the upper right of the results page.

- You will now see a list of all the articles for the author within the time period searched, ranked by number of citations per paper.
In the example above, in a search for R. Kim at Northwestern, 84 items were returned in the results. Some of these articles are highly cited, but others are cited 0 times. This author set's h-index is 26, because he has 26 articles that have been cited 26 times or more.

If you go to the page of the results that displays articles cited around 26 times, you will see a green line separating the articles above and below the h-index for this author.

Disadvantages of Web of Science

Web of Science does not have a controlled vocabulary. What this means is that you will need to plan your searches more precisely, e.g. think of synonyms or different ways of expressing the same search concepts.
One of the databases available in the Web of Knowledge suite of databases is Journal Citation Reports (JCR). With JCR, you can search for impact factors for journals.

Access JCR by clicking the Journal Citation Reports logo in the Popular Resources section on the Galter website or from the Popular Resources left side menu on the Galter homepage. If you are already in Web of Science, just click the Other Databases tab near the top of the page and choose Journal Citation Reports.

Choose the Sciences or Social Sciences edition. Reports are delayed by approximately 18 months.

Search by subject, publisher or region, or search for a specific journal.

Select one or more categories from the list. You can now choose to investigate all the journals in a category, or to sort by journal title.

Click Submit
What are Impact Factors and Immediacy Indexes?

- Impact factor for a journal indicates how often a journal’s articles are cited.
- Aggregate impact factor indicates how often a subject category’s journals are cited.
- Immediacy index for a journal indicates how quickly that title’s articles appear as citations by other authors.
- Aggregate immediacy index indicates how quickly a subject’s articles are cited by others in the field.

On this screen

- Re-sort by impact factor, immediacy index, number of cites or almost any other calculated metric on the page.
- Select journals by clicking checkboxes.
- Click on the title of a journal to see that journal’s data.
On this screen

- See the journal’s data as both citing and cited journal
- See the trend over the past years
- View the data and how it is calculated for a journal
- View publisher's info
- See the journal's ranking in a set of related publications

The following related tutorials are available on the Web of Science website (turn up your speaker volume):

- Impact Factor (7 mins.)
- Immediacy Index (5 mins.)

Customization with Citation Alerts and My ResearcherID

For authors who wish to track the citation activity of their work, Web of Science has some valuable features. In order to utilize these tools, you must first register at Web of Science by clicking the Sign In link near the top of any Web of Science page, then log in or register with Web of Science.
Once you have signed in, you can create citation alerts, save searches and manage your ResearcherID.

Creating Citation Alerts

You can create a citation alert for any paper (not just your own):

- Search for the paper(s) from the main search page
- On the item record page for a particular manuscript, click the Create Citation Alert link near the top of the blue Times Cited box on the right side of the page

You will see a box with your information and the article information. Click the OK button to be automatically
notified each time the article is cited

- To change your citation alerts, click the **My Citation Alerts** link at the top of the page. You can see all of your citation alerts. To modify how they are displayed via email or turn them off or on, click the **Modify Settings** button and make your changes in the next screen that displays.

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**My Cited Articles List**

![Image of My Cited Articles List]

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**My ResearcherID**

Web of Science has a feature called "My ResearcherID" which allows authors to attribute authorship of papers to themselves. This feature can be useful for author disambiguation.

To create your ResearcherID:

- Make sure you are logged in to your Web of Science account
- Click on **My ResearcherID** text link on the top of the Web of Science / Web of Knowledge page
- When you first register for My Researcher ID, you will be asked if you would like to register for an ORCID account. ORCID is an author ID system that transcends platform, so if you have a Researcher ID at Web of Science and another one at Scopus, you can associate them both with ORCID. If you already have an ORCID, you can enter it here, if not, click the button to create one. You will be then asked to fill in some information, read and agree to the terms of use.
- Once you are signed in to your **My Researcher ID** account at Web of Science, you can add and manage manuscripts by using the **My Publications** area on the left of the page
- View your citation statistics by clicking the **Citation Metrics** link
- You can also create publication lists, so if you have multiple publications in separate fields, you can organize them by using the publication lists.
- Using your ResearcherID is a more accurate way of determining your h-index using Web of Science data

### Other Features

- **Related Records** displays a list of articles whose cited reference lists include at least one of the sources cited by the original article
- **Results Analysis** allows you to analyze your results and view rankings by author, institution, journal name, and other factors
- **Open Saved Search** allows you to re-run saved searches from previous Web of Science sessions.
- **Help** is always available on each screen in Web of Science

If the Help pages do not answer your question or you would like to consult with us on search strategies or the use of Web of Science, please contact us by [email] or call (312) 503-8109

### Related Videos and Tutorials
The following related tutorials are available on the Web of Science website (turn up the volume of your speakers):

- Search tips for Web of Science (7 mins.)
- Managing Search Results (6 mins.)
- Refine and Analyze Search Results (7 mins.)
- Cited Reference Searching (7 mins.)
- Impact Factor (7 mins.)
- Immediacy Index (5 mins.)

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