

USEFUL SCIENCE DATABASE FOR SEARCHING INFORMATION

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Updated 11th May, 2011

OBJECTIVE: To teach students to search for the most up to date information in a topic.

TARGET AUDIENCE:

- Undergraduate students can find the latest information of a topic. It is useful if you wish to learn more from self study. You can find out newly published information, e.g. weeks old information. On the other hand, information from books may be several years old.
- Final year project students can also acquire this skill. This helps you to conduct your literature survey in your project
- Research students can familiarize with how to search the latest information in journals and conferences, and what to do when the item is not available. This helps you to conduct your literature survey and to keep track of what is just published.

INTRODUCTION

1. The databases are useful if you are working in the field of Science and Engineering. If you are working in other fields (e.g. Social Science, Philosophy), there are other relevant databases. Ask a Librarian or a teacher working in your field.
2. Knowing how to use these databases is essential for your research or information collection in final year projects.
3. These databases help you to find the latest information on a particular topic. These are the most recent knowledge, weeks old information. For example, after a conference is finished, the electronic proceedings may take two or three months to be uploaded to the web. On the contrary, the information in your text book is usually several years old.
4. Sometimes, you can get even more recent information. Soft copies of accepted papers may be downloadable from a journal home page; preprints may be obtained directly from the author or available in the web; technical reports are

published by major laboratories e.g. Santa Fe Institute; the peer grapevine network, e.g. genetic algorithm interest groups, can be most effective;

WHERE ARE THESE DATABASES?

Go to CityU Library Home; Under “Electronic Resources”; Select “Databases”

SCIENCE DATABASES

1. Scopus <http://www.scopus.com/home.url> A very useful database that lists both journal and conference articles. A very useful feature is the links to papers that have cited the work.
2. IEEE Xplore <http://ieeexplore.ieee.org/Xplore/dynhome.jsp> It collects all documents sponsored by IEEE, including both journals and conferences. The PDF of all such documents are available, provided that you are accessing the database within the University.
3. Web of Knowledge http://www.cityu.edu.hk/lib/eres/database/abc/db_w.htm A very useful database that allows you to search using authors and keywords. It lists journal and conference articles. A very useful feature is the links to papers that have cited the work.
4. Science Direct <http://www.sciencedirect.com/> Another useful database that collects journal articles.
5. Google Scholar <http://scholar.google.com.tw/> A useful publicly available free database, but the quality of the citations is less good than the professional Scopus and Web of Knowledge. For CityU subscribed database, PDF download is now available via the Findit@CityU link.

HINTS

1. Good searching skills is very important. Consult the online training information of the databases: For example, the training sessions in Web of Knowledge's first page under “Discover Web of Science -> Training in multiple languages” is helpful. For example, it tells you how to construct good search operators.
2. Familiarize with the use of logical operators: AND, OR, NOT, (), “ ”, SAME and wild card characters * , \$, ?.

Example 1

wavelet*

means search any word that begins with wavelet.

Example 2

ant\$

means there is zero or one character in the \$ position. So it can search for both “ant” and “ants”.

Example 3

ant?

means there is exactly one character in ? position. So it can search for both “ants” and “antz”.

Example 4

(genetic algorithm* OR evolutionary*) AND (neural network*)

searches for “genetic algorithm*” or “evolutionary*”, and the results must also contain “neural network*”. For Web of Knowledge, the order of precedence is NOT > AND > OR. Try () if you wish to change the order of precedence.

Example 5

“genetic algorithm design rule”

The exact wording must appear in the text.

Example 6

bear SAME cat

means that in a sentence, after “bear” appears, “cat” also appears within the same sentence.

3. One effective way to get a feel of the latest development is to look up an important paper, then look at the cited references. The web of science will give you a list of papers that has cited this paper in their reference list. Then you can read the most recent relevant papers about the technique first developed by the original paper.
4. Usually, an important paper has a lot of citations. Of course, this rule does not apply to important papers that are just published – it takes awhile for the first citation to appear. To identify those papers, you need to consult your professor, knowledgeable colleagues or your own peer network.
5. Another way is to search for the latest survey paper in the field.

After finding the references, you will need to get a copy of the full paper. The next section teaches you how if you are a City University student:

HOW TO GET THE FULL PAPER

- a) Check whether a journal is available in library in electronic format. Type in the journal name using title search. (Exercise: try to find “International Journal of Computer Vision”).
- b) If the journal is not available in electronic format, it does not necessarily mean that it is not in the library. Older issues may be available in the library in book format. Try to search for the journal using the library catalogue (Exercise: search the journal “Computer Graphics and Image Processing”).
- c) Non-IEEE conferences may not be electronic accessible. However, chances are the library will have it in book format. Again, try to search for the conference using the library catalogue. Here the Keyword search with appropriate restriction is particularly helpful. (Exercise: Search for the “SIGGRAPH Computer Graphics Conference Series”).
- d) If you are sure that the library does not have the journal/conference, fill out an interlibrary loan request (go to library home page, click “interlibrary loan”). The library will send a request on your behalf to other libraries local and overseas and have the hard copy of the paper delivered to you. If you are a student, ask your supervisor to approve it or do it for you.
- e) Don’t be afraid to ask the Librarian at the information counter for help.
- f) If you are not within the university, these databases may not be accessible. Connect CityU VPN to gain access.

USEFUL LINKS

The CityU library has a research guide arranged by subject department:

<http://libguides.library.cityu.edu.hk/>