

SCIENTIFIC SEARCH ENGINES

by Dave Lankin

In previous articles in the WEBings column, we have discussed WWW search techniques including a discussion of search engines such as Google. Those who might be interested in or have need for restricting searches for purposes obtaining scientific and / or technical information will be interested in two relatively new search engines that have become available: Scirus (from Elsevier) and Google Scholar.

Scirus Search Engine. The first of these is Scirus (pronounced: sigh – russ) and may be found at [<http://www.scirus.com>]. The search engine was developed with Elsevier Publishing and is designed to search and retrieve scientific information on any topic that is available on both the web as well as in printed documents (e.g., technical journal articles). Because Elsevier publishes technical journals (> 65% of the journals in science and medicine are Elsevier journals), scientific and technical articles from their journals are obviously retrieved (funny how that works!). You only need to have a subscription or on-line access (e.g., at a university) to Elsevier publications in order to read or download the pdf files of articles of interest. If you have access to Elsevier journals, then you have access to the original literature. While the search engine is good in that it “filters out” most non-technical citations, nevertheless, it does represent a marketing tool for Elsevier and use of this search engine should take this into account. But, that said, I have found that it does a pretty good job at extracting the information citations that you are looking for without displaying too much unwanted information. You can fine tune the search that you are doing by going into the Advanced Search mode, and selecting (or de-selecting) certain

Published between	1920 and 2006
Information types	<input checked="" type="checkbox"/> All <input type="checkbox"/> Abstracts <input type="checkbox"/> Articles <input type="checkbox"/> Books <input type="checkbox"/> Company homepages <input type="checkbox"/> Conferences <input type="checkbox"/> Patents <input type="checkbox"/> Preprints <input type="checkbox"/> Scientist homepages
File formats	<input checked="" type="checkbox"/> All <input type="checkbox"/> HTML <input type="checkbox"/> PDF
Content sources	<input checked="" type="checkbox"/> All Journal sources <input type="checkbox"/> BioMed Central <input type="checkbox"/> Crystallography Journals Online <input type="checkbox"/> MEDLINE/PubMed <input type="checkbox"/> Project Euclid <input type="checkbox"/> ScienceDirect <input type="checkbox"/> Scitation <input type="checkbox"/> Society for Industrial & App. Mathematics <input checked="" type="checkbox"/> All Web sources <input type="checkbox"/> E-Print ArXiv <input type="checkbox"/> CogPrints <input type="checkbox"/> NASA <input type="checkbox"/> US Patent Office <input type="checkbox"/> European Patent Office <input type="checkbox"/> Japanese Patent Office <input type="checkbox"/> Patent Cooperation Treaty Office <input type="checkbox"/> Other
Subject areas	<input checked="" type="checkbox"/> All <input type="checkbox"/> Agricultural and Biological Sciences <input type="checkbox"/> Astronomy <input type="checkbox"/> Chemistry and Chemical Engineering <input type="checkbox"/> Computer Science <input type="checkbox"/> Earth and Planetary Sciences <input type="checkbox"/> Economics, Business and Management <input type="checkbox"/> Engineering, Energy and Technology <input type="checkbox"/> Environmental Sciences <input type="checkbox"/> Languages and Linguistics <input type="checkbox"/> Law <input type="checkbox"/> Life Sciences <input type="checkbox"/> Materials Science <input type="checkbox"/> Mathematics <input type="checkbox"/> Medicine <input type="checkbox"/> Neuroscience <input type="checkbox"/> Pharmacology <input type="checkbox"/> Physics <input type="checkbox"/> Psychology <input type="checkbox"/> Social and Behavioral Sciences <input type="checkbox"/> Sociology

Scirus Search Settings Page

Search

topics. You can restrict your search efforts, for example, to information relating only to patents or patent information if you so desire. It should be remembered that Scirus will provide citations from the published literature but will emphasize those articles that relate to Elsevier journal publications.

Google Scholar Search Engine. This search engine is relatively new (and still in Beta) and may be accessed by going to [<http://www.google.com>], selecting ‘more’ and then selecting scholar or by typing into your browser and bookmarking the website [<http://scholar.google.com/>]. This search engine works equally well as Scirus

despite its being a more general search engine, but is still focused on scientific and technical topics; tending to provide more citations on the same topic than Scirus. The BIG difference, however, is it generally will not pick up journal articles from published primary scientific literature. Most search engines generally won’t pickup these kinds of literature citations unless a specific article of interest has been dumped onto a website for some reason.

At present, the only two search engines that I am familiar with that will pick up scientific (chemical) information from the published literature are SciFinder (Chemical Abstracts) and Cross-Fire (Beilstein Database from MDL). These are commer-

Scirus Home Page

SCIRUS
for scientific information only

[About Us](#) | [Newsroom](#) | [Advisory Board](#) | [Submit Web Site](#) | [Search Tips](#) | [Contact Us](#)

[Search Preferences](#) [Basic Search](#) | [Advanced Search](#)

Number of results	Display <input type="text" value="10"/> results per page
Results window	<input type="checkbox"/> Open search results in a new browser
Results clustering	<input checked="" type="checkbox"/> Cluster results by domain
Query rewriting	<input checked="" type="checkbox"/> Automatically rewrite queries to improve results

[Save preferences](#)

Scirus Search Preference Page

Scholar Preferences

Institutional Access Show institutional access links for (choose up to three institutions):

<input type="checkbox"/> American University of Beirut (AUB Access)	<input type="checkbox"/> Massachusetts Institute of Technology (MIT Acc
<input type="checkbox"/> Bates College (Bates Article Linker)	<input type="checkbox"/> Stanford University (Find It @ Stanford)
<input type="checkbox"/> Brandeis University (GetIt @ Brandeis)	<input type="checkbox"/> Technische Universität München (TUM SFX)
<input type="checkbox"/> California Institute of Technology (Caltech Access)	<input type="checkbox"/> Universiteit van Amsterdam (UvA Access)
<input type="checkbox"/> Canterbury Christ Church University College (Canterbury Access)	<input type="checkbox"/> University of Calgary (UofC Access)
<input type="checkbox"/> Colgate University (Colgate Article Linker)	<input type="checkbox"/> University of California (UC-eLinks)
<input type="checkbox"/> College of Saint Benedict, Saint John's University (CSBSJU Access)	<input type="checkbox"/> University of Iowa (Iowa InfoLink)
<input type="checkbox"/> Consejo Superior de Investigaciones Científicas (Erlaces CSIC)	<input type="checkbox"/> University of Michigan (Availability at UMichigan)
<input type="checkbox"/> Duke University (Duke Access)	<input type="checkbox"/> University of Oregon (UO FindText)
<input type="checkbox"/> Emory University (Emory Access)	<input type="checkbox"/> University of Pennsylvania (PennText)
<input type="checkbox"/> Hampshire College (Hampshire Access)	<input type="checkbox"/> Vrije Universiteit Brussel (V-link @ VUB)
<input type="checkbox"/> Harvard University (FindIt @ Harvard)	<input type="checkbox"/> Washington University in St. Louis (WU Article I
<input type="checkbox"/> Houston Academy of Medicine - Texas Medical Center (HAM-TMC Library)	<input type="checkbox"/> Yale University (Yale Access)
<input type="checkbox"/> Los Alamos National Laboratory (LANL Access)	

Google Scholar Preference Page

Google Search Beta Site

[Advanced Scholar Search](#)
[Scholar Preferences](#)
[Scholar Help](#)

Stand on the shoulders of giants

[Google Home](#) - [About Google](#)

©2005 Google

cial search engines available for the chemical sciences and cost a LOT of money and are used primarily by industrial, university, and research institute accounts. Use of Scirus and Google Scholar together (both free) can provide very good coverage of scientific and technical subjects and are both easy to use. Remember, however, when using any search engine for retrieving information, selection of proper keywords to describe the topic of interest is probably most important aspect of web searching.

A few months ago I sent email to Google suggesting that as scientific and technical literature in the form of PDF files becomes more available (free of charge) on the WWW, they should strongly consider developing a search engine, similar to SciFinder, for gathering scientific and technical information and very focused on this area. Google Scholar may very well be Google's response to this suggestion. 🍏

Editor's Note – I find myself feeling very appreciative of TNWoU's dedication to Members Helping Members and the Mac community's general computing savviness. From Dan Pourhadi's article about what he uses in getting what he needs; to Dave's revelation here on how 'specialized' you can get your Internet searches to be; to the story of Chicagoland Mac users sleuthing the Internet to track down a swindler scamming eBay users interested in good deals on Macs. We are concerned about keeping Apple computer use viable and healthy.

More on Specialized Search Engines

by Dave Lankin

In a previous article in the WEBings column (Passages, April 2005), I discussed specialized search engines specifically for retrieving scientific information. There are appearing a number of very specialized search engines for searching other topics of interest. Since September signals the beginning of the school year, I thought it might be appropriate to examine some of the search engines that are available and are appropriate for both educators as well as for students.

Here are some of the search engines I have found and this is by no means exhaustive. For additional search engines in any area you can fire on Google and enter "search engines for <subject area>" and you will be amazed at what appears.

Just a quick note you will notice the websites have different suffixes: .com for commercial websites; .gov for U.S. Government websites; and .org for organizational websites. These are legitimate website notations and more are planned. So here we go:

meta crawler.com - is a search engine that

can search for search engines. It also can locate businesses (yellow pages) and individuals (white pages). It is a very good search engine and a good starting point to gather information.

about.com - is a website that is a wealth of information. You can enter a topic and you can track down oodles of information about the topic. Again the educational benefits of such a website are limitless.

nasa.gov - is a rich resource of information on the space program; there are photographs and gobs of detailed information for just

about any educational project for students and teachers alike.

computerhistory.org - provides a timeline for the complete historical development of computers. It is linked to the computer history museum and there is a tremendous amount of information on computer history available here.

education-world.com - is a site has a lot of information that will be of interest to teachers and educators on a daily basis. The site has lots of commercial links to "virtual universities", links to site that will aid in putting together class lesson plans, etc. This appears to be a useful site for edu-

tion to make that classroom experience a little more interesting, this is perhaps a good place to start.

allsearchengines.com/education.html - is a search engine that links to other search engines within the educational framework. Again this could be a good starting point to look for information and educational websites.

These are but a few of the educational websites that are available. These websites will get you started and it is up to you to expand your horizons...educationally.

caters no matter what the experience level might be.

eduhound.com - is a website that is for K-12 and has a lot of links to information on just about any topic of interest. It looks like a very nice complement to some of the other websites listed here.

refdesk.com/educate.html - is a website that has links to information. It is like a virtual encyclopedia and is quite extensive. Looking for informa-