

The Art of Discovery: Federated Search Engines in the Science and Technology

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Abstract

For the general audience, searching the Internet is now a common skill as driving a car. Many people are using just one search engine to find information they are looking for. As all librarians know, Google is not the only tool for discovering knowledge. Not only there are alternative general search engines beyond Google, there are other specialized search engines for specialized content. Results can be categorized, clustered, or displayed graphically. This poster session will show the attendees a number of additional ways to search for scientific information on the Internet beyond Google and commercial databases and will provide them with the tools to become more confident searchers.

Definition

Federated search engines are developed to search multiple databases, regardless of location and structure, with one query and to display the results packaged in the most relevant way.

“Federated search is a “starting point for research,” a shotgun approach. Each federated search engine is different, ranks results in different ways, and presents results in different ways.”

Drake, M. (2008). Federated Search One Simple Query or Simply Wishful Thinking? *Searcher*, 16(7), 22-62.

Pros

- Save time using one-stop searching from a single interface
- Find some background information about authors
- Access indexes from other countries

Cons

- Not effective for all types of questions and queries
- Imprecise searching
- Possibility of lower-quality results
- Unpredictable reactions to queries by various databases
- Slow response time
- Common authors' names present special search problems
- Languages present many problems

Conclusion

If you find that a federated search engine meets your needs, use it! However, they are not the solution for an exhaustive—or even a moderately extensive—search. Effective information finding requires users to have extensive knowledge of sources, to know how to build effective search strategies, and to have the experience to evaluate results.

GOAL: Search theses from Australia

HTML code for embedding the search box in a web page.

Welcome to Australian Research Online - where you can search 498 576 Australian research outputs, including theses, preprints, postprints, journal articles, book chapters, music recordings and pictures.

Australian Research Online searches simultaneously across the contents of Australian university and government research repositories in addition to several other collections of Australian research. The list of currently participating universities, and government departments with the number of outputs currently in each repository, is listed at the left.

For more information about the service, visit the About page. To view the most frequently accessed research items, and most popular creators, visit the Statistics page. Or to view the contents of an institution's repository listed as a tag cloud, visit the Tag cloud page.

Got some feedback? We'd love to hear from you. Contact us and tell us what we do well, and/or what we could do better.

Search for:

condensed matter

accounting analysis applied architecture arts
biochemistry clinical computer conservation creative
cultural digital education educational engineering
evaluation exel expanding historical history human

GOAL: Search scientific databases from around the world

Search in your language: English, Français

Home | About | News | Advanced Search | Contact Us | Site Map | Help

Enter Search Terms

Search

INTERACTIVE MAP

Click on region to zoom in on participating countries.

WorldWideScience.org is a global science gateway—accelerating scientific discovery and progress through a multilateral partnership to enable federated searching of national and international scientific databases and portals.

GOAL: Search scientists' professional pages and international repositories

SCIRUS for scientific information only

This federated search engine allows researchers to search for scientists' homepages, courseware, pre-print server material, patents and institutional repository and website information.

Advanced search

All of the words in The complete document

AND

All of the words in The complete document

Search

Search tips

author:smith find results that have "smith" in the author field
DNA -sequencing find results that have "DNA" but not "sequencing" in the text
car find results that have "car" as well as "carbon", etc.

Information types

Only show results that are

☒ Any information type
☐ Abstracts
☐ Articles
☐ Books
☐ Company homepages

File formats

Only show results that are

☒ Any format
☐ PDF
☐ HTML
☐ Word

Content sources

Only show results from

Journal sources

☒ All
☐ American Physical Society
☐ BioMed Central
☐ Crystallography Journals Online
☐ Hindawi Publishing Corporation
☐ IOP Publishing
☐ List more sources

Preferred Web sources

☒ All
☐ E-Print ArXiv
☐ Caltech
☐ CogPrints
☐ Curator
☐ Digital Archives
☐ List more sources

Subject areas

Only show results in

☒ All subject areas
☐ Agricultural and Biological Sciences
☐ Astronomy
☐ Chemistry and Chemical Engineering
☐ Computer Science
☐ Earth and Planetary Sciences
☐ Economics, Business and Management
☐ Engineering, Energy and Technology
☐ Environmental Sciences
☐ Languages and Linguistics

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Define Results

How Search

Advanced Search

Deep

Search: Full Text 1,441 unique results 1 - 10

Create alert from this query

314 more results found Add

41 of 43 sources complete

Summary of All Results

Your Selections (0) Clear Selections Email Results Session Preferences Print Page

Clusters

43 Results (1127)

2010-09-10

Topics

Condensed Matter Physics (92)

Report (80)

Surface (69)

Materials Science (59)

Electronic Structure (48)

More...

Dates

2010 (440)

2009 (87)

2008 (31)

2007 (22)

2006 (12)

More...

Wikipedia

Condensed matter physics

Condensed matter physics is the field of physics that deals with the microscopic and microscopic ... more [edit federal site] disclaimer

EuroAlert

Nobelist Walter Kohn to receive 2010 Prange Prize

2010-09-17

Walter Kohn, who invented the density-functional theory of matter, has been named the 2010 recipient of the Richard E. Prange Prize

