

Read-Me for Literature Searches

Many of the databases for academic literature searches are available by subscription only. To search from a non-University computer, go to the Physics homepage (<http://physics.illinois.edu/>), scroll down to the footer at the bottom of the page, and then click on "Physics Library." If you are working from a computer outside the .illinois.edu domain, you'll be prompted to authenticate using your netid and AD password. Once you log on, you'll be able to access all electronic resources for which the University Library has a subscription.

<http://www.library.illinois.edu/phx/>, find the list of "Electronic Resources" and click on "Article Databases" to bring up the next screen:

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Electronic Resources

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Article Databases

- SCOPUS
- ARIBIB (Astronomisches Rechen-Institut BIBliographical Database for Astronomical References)
- arXiv.org E-Print Archive
- Astrophysical Data System (ADS)
- INSPEC (Physics Abstracts: 1895-)
- INSPIRES High Energy Physics Database
- Web of Science
- Database of Observatory Publications
- SciTech Connect
- Department of Energy Pages: Public Access Gateway for Energy & Science

Full-Text Portals

- [IEEE/IEE Full-Text](#)
- [AIP Scitation](#)
- [AIP Scitation User Guide \(pdf\)](#)

Contact Us
Address: University Library
University of Illinois at Urbana-Champaign
1408 W. Gregory Dr. | Urbana, IL 61801
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Federal Depository Library Program

The librarian in charge of the physics collection, Dr. Mary Schlembach, is the goddess of finding the most obscure information you'll ever look for. Reach out to her via [email](#); she's very responsive and always eager to help physics students.

SCOPUS

Largest (according to them) abstract and citation database of peer-reviewed literature, including journal articles, monographs, and books, in the life sciences (>4300 titles); physical sciences (>7200 titles); health sciences (>6800 titles) and social sciences and humanities (>5300 titles). Searchable by key word, author's name, and author's affiliation. Includes citation information automatically in results for author searches, and provides links to many full-text articles at the publishers' websites.

- From the main page (linked off the Physics Library screen), select the relevant tab for the kind of search you wish to perform (use the "document search" tab to search for topics).
- To speed up searches and limit results, turn off irrelevant subject areas by unchecking them (the default is to search all).
- Add search fields to further refine your searches.

INSPEC

Searches multiple databases: Compendex (primarily electrical engineering papers); Inspec (exclusively physics papers, from 1895); National Technical Information Service (NTIS), an agency of the US Department of Commerce that archives scientific, technical, and engineering reports); GEOBASE (earth sciences and geography); GeoRef (geosciences); US patents, European patents, and RefereX (engineering e-books)

- From the main page (linked off the Physics Library screen), use the quick-search tab, fill in the field(s) with your search term(s), and use the pull-down menu to indicate the category of the term.
- To speed up searches and limit results, turn off irrelevant databases by unchecking them (the default is to search all databases).
- Use the pull-down limiting items to further refine your searches.

Astrophysical Data System (ADS)

Exclusively astronomy and physics; consists of three bibliographic databases (>10.5-M records). In addition to published papers, the databases also include bibliographic citations for arXiv e-prints in astronomy and physics. Has both "search" and "browse" features, email updates notification service, and customizable query forms.

Web of Science

The grandfather of science citation databases. I find it harder to use than some other databases, and the UI is limited to x people searching at the same time. Although x is a large number, demand sometimes exceeds the number of available search sessions, particularly toward the end of the semester. (Forewarned is forearmed.)

- From the main page (linked off the Physics Library screen), click on the blue down arrow on the left of the screen next to "Basic Search" and select "cited reference search." (Unlike Scopus and Google Scholar, you must do a specific search to obtain citation data.)
- To speed up searches, limit the available search fields

Google Scholar

Biggest database; in addition to peer-reviewed literature, also contains citations to books, e-prints and self-published materials. Contains links to articles, which may or may not be peer-reviewed or the official publishers' versions.

- Go to scholar.google.com and type your search terms into the search field. You can include or exclude patents. Scholar searches either "articles" or "case law."

INSPIRE

High-energy physics literature; collaboration among CERN, DESY, Fermilab, and SLAC; includes published papers and arXiv articles; LHC experimental notes also included. Uses three separate search interfaces, which I find frustrating; takes some time to master.

arXiv

Open access to >900 000 e-prints in physics, mathematics, computer science, quantitative biology, quantitative finance, and statistics. N.B. these articles are **not** peer-reviewed before being posted to arXiv—*caveat lector!* ["Reader beware"] Search by keyword, author name, or article-id; browse feature; automatic email updating service. <http://arxiv.org>