

# Introduction to Library Resources in Mathematics and Statistics

## Autumn Quarter 2009

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Welcome to Stanford! This handout is aimed at those who are new to Stanford and is designed to highlight some of the library resources available in mathematics and statistics. It is intended as a supplement to the pamphlet describing the Mathematical and Computer Sciences Library, <http://mathcslibrary.stanford.edu>, and its services (available at the library).

### Socrates, The Library Catalog

<http://catalog.stanford.edu/>

This **IS** the place to find out what books, journals, and technical reports are owned by the Stanford University Libraries (SUL).

This **IS NOT** the place to look for journal, magazine, or newspaper articles (you will need to use an article index or database such as MathSciNet for this).

There are two ways to search: Simple and Combined. You can also browse by call number and search for electronic resources (but NOT online journal articles). Online help is available for all search methods.

- TIP: the truncation symbol in Socrates is **\$**, e.g., **math\$** finds any word beginning with this stem, including mathematics, mathematical, maths, etc.
- TIP: to search for a numbered series such as Handbook of Statistics, type the series title and the volume number and click on the "Title" button.

If you run into problems using the catalog, let us know by clicking on the Tell Us button at the top of the page. Feedback is always welcome.

### NEW! SearchWorks (beta)

is our next generation search engine. Try it out at <http://searchworks.stanford.edu/>. Socrates continues to be our up-to-date online catalog.

### Library resources

#### Article/Conference Paper Indexes

<http://library.stanford.edu/catdb/alldata.html>

#### MathSciNet (*Mathematical Reviews*)

<http://ams.rice.edu/mathscinet/>

THE main index in the United States for mathematics literature published after 1940, *Mathematical Reviews* is

available on the World Wide Web as part of MathSciNet. However, MathSciNet also gives you access to *Current Mathematical Publications*, a current awareness journal that lists the latest books and journal articles in mathematics.

If MathSciNet has made arrangements with the publisher and the library has a subscription to a journal indexed in MathSciNet, MathSciNet provides links from reviews to original articles in full text. Currently, MathSciNet provides active links from reviews to the full text of more than 308,000 online articles in over 190 journals. To view an article, just click on the "Article" icon.

The color booklet *MathSciNet: Mathematical Reviews on the Web: Guiding you through the literature of mathematics* is an informative introduction to MathSciNet, with detailed step-by-step explanations on how to make use of the full range of search capabilities and features of MathSciNet. You can download the guidebook in PDF at <http://www.ams.org/msnhtml/guidebook.pdf>.

### Looking for mathematics articles before 1940?

MathSciNet (*Mathematical Reviews*) covers articles in mathematics from 1940 to the present. But if you are looking for something that indexes articles before 1940, here are some alternatives:

*Royal Society (Great Britain). Catalogue of Scientific Papers, 1800-1900, Subject Index, v.I, Pure Mathematics* [Math/CS Library Ref Z7403 .R88 V.1] contains 38,748 entries covering 700 serials during this time period.

#### *Bulletin de Bibliographie, d'Histoire et de Biographie Mathématiques*

was a supplement to *Nouvelles annales de mathématiques* [Math/CS Library Storage Area MFILM N.S. 11167] from 1855-1862.

#### *Jahrbuch über die Fortschritte der Mathematik*

covers articles published from 1868 through 1942. An online version is available at EMIS (The European Mathematical Information Service) at <http://www.emis.de/MATH/JFM/JFM.html>.

*Zentralblatt für Mathematik* (aka *Mathematics Abstracts*) indexes articles from about 2,000 journals and serials, books, conference proceedings, and other research papers from 1931 to the present. Go to <http://zb.msri.org/ZMATH/>.

**JSTOR** [<http://www.jstor.org>] offers full-text searching of every article from every journal in the collection. If you are interested in a pre-1940 article in one of JSTOR's journals, including

*American Journal of Mathematics* (1878-2003)  
*American Mathematical Monthly* (1894-2005)  
*Annals of Mathematical Statistics* (1930-1972)  
*Annals of Mathematics* (1884-2003)  
*Biometrika* (1901-2003)  
*Journal of Symbolic Logic* (1936-2004)  
*Journal of the American Statistical Association [JASA]* (1888-2003)  
*Journal of the Royal Statistical Society. Series A [Statistics in Society]* (1838-2004)  
*Journal of the Royal Statistical Society. Series B [Methodological]* (1934-2004)  
*Transactions of the American Mathematical Society* (1900-2003)

this is a way to locate them. MathSciNet also provides direct links to articles available through JSTOR.

### **Current Index to Statistics (CIS)**

<http://www.statindex.org/CIS/psqlQuery>

Current Index to Statistics (CIS) is the primary index for the statistical sciences, although there is some overlap with MathSciNet. It indexes articles in journals, edited books and proceedings from before 1975 up to about the last year. This index is also available in print at the library in Reference through 1999.

### **SciSearch (Science Citation Index)**

<http://isiknowledge.com/WOS>

Although articles indexed in SciSearch are from 1900 to the present, references cited by these articles may be from earlier years. Use the Cited Reference Search screen to browse by cited author. Unfortunately, coverage of mathematics and statistics journals in SciSearch has been historically poor compared to other areas of research.

### **INSPEC**

<http://isiknowledge.com/INSPEC>

INSPEC is the premier database in the world that indexes the literature of physics, electronics, and computing. Coverage online is available from 1898 to the present. The database is hyperlinked across records and indexes, as well as to full-text journals of IOP, AIP, APS, and others.

### **Journal Citation Reports (JCR)**

<http://isiknowledge.com/JCR>

*Journal Citation Reports*, is a database of comprehensive statistical information on journal relevance and relative importance (including impact factors). The data used is drawn from citation indexes such as SciSearch. The JCR

Web Science Edition covers roughly 5000 journals for issues published 1997-2008. Earlier years are available on microfiche (MFICHE 1815) and CD-ROM at the Physics Library. **NOTE:** JCR does *not* cover conference proceedings. MathSciNet has recently added a similar service for the articles it indexes for 2000-08.

## **Full-text Resources Online**

### **Stanford Dissertations (1987- )**

<http://library.stanford.edu/depts/ssrg/econ/dissertations.html>

Stanford University dissertations from roughly 1987 to the present are freely available online to the Stanford community under an agreement with ProQuest.

### **Online books**

<http://library.stanford.edu/depts/serg/collect/SciEngETexts.html>

The number of books in mathematics available online has been growing steadily. Many are classic works from the 19<sup>th</sup> and early 20<sup>th</sup> centuries. The list on this web page is not intended to be comprehensive, but highlights some of the larger collections, including Lecture Notes in Mathematics, the Cornell Digital Library Math Book Collection, and the University of Michigan Historical Mathematics Collection. The Stanford University Libraries have some of these books available in print; search Socrates to see if what you want is available.

### **Historical Math Monographs at Cornell**

<http://mathbooks.library.cornell.edu/>

### **Mathematics Collection from Göttingen**

[http://gdz.sub.uni-goettingen.de/en/dms/colbrowse/?tx\\_goobit3\\_search%5Bextquery%5D=ISWORK%3A1&DC=mathematica](http://gdz.sub.uni-goettingen.de/en/dms/colbrowse/?tx_goobit3_search%5Bextquery%5D=ISWORK%3A1&DC=mathematica)

### **University of Michigan Historical Mathematics Collection**

<http://quod.lib.umich.edu/u/umhistmath/>

### **Lecture Notes in Mathematics (LNM)**

<http://www.springerlink.com/link.asp?id=110312>

### **Springer books online (2005- )**

<http://www.springerlink.com/>

### **SCI-TECHnetBASE**

<http://www.sci-techbase.com/>

This collection includes 4,570 e-books (as of January 2009) covering scientific and technical information, including handbooks and single-volume reference sources.

## **ebrary (requires plug-in, Windows only)**

<http://site.ebrary.com/lib/stanford/>

Ebrary is an online book service covering a wide range of subjects, including computer networks and computer security. Requires a browser plug-in which can be downloaded from the site. (If you decide to browse the collection, go to Science – Mathematics)

## **Encyclopedia of statistical sciences**

<http://www.mrw.interscience.wiley.com/ess>

## **MyiLibrary**

<http://www.myilibrary.com/browse/open.asp>

A collection of many of the e-books published in 2005-07 from Springer, Taylor & Francis, Oxford and Cambridge University Presses, as well as intergovernmental publications from the International Atomic Energy Agency, the International Labour Organisation, and others.

There's no need to create an account, unless you wish to take advantage of the full functionality at the site. (If you decide to browse the collection, go to Science – Mathematics)

## **The Online Books Page**

<http://digital.library.upenn.edu/books/>

An index of over 25,000 online books freely readable on the Web, you can search by subject, title, or author or you can browse by Library of Congress call number.

## **Journals & Conference proceedings**

### **Master online journal list**

<http://library.stanford.edu/ejournals>

Journals available online at Stanford include those published by:

- AMS
- Elsevier
- SIAM
- Springer
- Wiley

If you don't find the electronic journal you're looking for on the list of available e-journals or in Socrates, ask us if the journal is available online. However, we have many journals that are only available in print. If we don't have a copy of the journal article you need, we can usually obtain it from other sources.

## **JSTOR**

<http://www.jstor.org/>

JSTOR is an electronic archive of major English-language scholarly journals in a wide variety of disciplines. The goal is to have all volumes of these journals up to the last five years or so, called a "moving wall." There are now

over 80 math and statistics journals available at JSTOR. Some of them are listed above under "Looking for mathematics articles before 1940?" but the complete list of journals is available at <http://www.jstor.org/browse>.

## **Setting Up Off-Campus Access**

<http://library.stanford.edu/apcproxy/index.html>

If you wish to access library-provided online indexes, books, and journals, you'll need to set up your browser to go through our proxy server.

## **Technical Reports and Preprints**

### **Technical Reports Owned by the Stanford University Libraries**

The Math/CS Library has a large collection of technical reports received on exchange from other universities and industry, as well as those produced on the Stanford campus. These are cataloged in Socrates and are shelved in the Storage Area of the library.

### **Technical Reports and Preprints Online**

There are many preprints and technical reports available for free online. Here are a few useful sites to help you locate technical reports:

#### **Virtual Technical Reports Center**

<http://www.lib.umd.edu/UMCP/ENGIN/TechReports/Virtual-TechReports.html>

This metasite lists institutions that provide either full-text reports or searchable extended abstracts of technical reports on the World Wide Web and contains links to technical reports, preprints, reprints, dissertations, theses, and research reports of all kinds.

#### **Directory of Mathematics Preprint and e-Printer Servers**

<http://www.ams.org/global-preprints/>

This AMS site is a master list of mathematical preprint and e-print servers worldwide. It also includes a list of retired preprint services.

#### **Front for the arXiv (UC Davis)**

<http://front.math.ucdavis.edu/>

The Front for the arXiv automatically retrieves abstracts of new and revised articles in the e-print arXiv at Cornell and offers them for searching and browsing. The arXiv currently has over 65,000 articles in mathematics. Other subjects covered include statistics, physics, nonlinear sciences, quantitative biology, and computer science.

## Library Services

### Your Circulation Records on the Web

Stanford users with a SUNet and a University ID can find out what items they have checked out from the Stanford libraries on the Web. Records for items checked out from the Jackson Business Library, Lane Medical Library, and the SLAC Library are NOT available.

This service, "My Account," also allows you to renew eligible items online (a maximum of 2 renewals per item), view outstanding bills and bills previously paid or cleared, and look at the status of items requested for hold or recall. Renewals using this service take effect immediately, unlike email renewals, which usually take about 24 hours to process.

To use this service, click on the "My Account" button on the SUL/AIR Web page at <http://library.stanford.edu/>.

### Hold/Recall requests via Socrates

If you find that an item you want is checked out when you look up its record in Socrates, you can request that a hold or recall be placed on the item by clicking on "Request this item." You will be asked to fill out an online form (SUNet ID required). When the item has been returned to the library, you will receive an email notifying you of its availability and giving you 7 days to pick it up.

**Please note** that if the title is on reserve, it cannot be held or recalled for you.

A **HOLD** does not affect the current loan period; it simply puts you in line for the item after it has been returned. A hold can be placed on any item whose loan period is one day or longer.

A **RECALL** shortens the current loan period and requires the user who has the item to return it within 7 days or face stiff overdue fines. Recalls cannot be placed against an item whose loan period is 14 days or shorter; place a hold for those items instead.

### Paging from storage (SAL1&2 and SAL3)

Due to limited shelf space in the Math/CS Library, a significant fraction of the collection is housed at the Stanford Auxiliary Libraries, SAL1&2 and SAL3 (off-site storage). These are generally lesser-used books, journals and theses.

If something you need is at SAL1&2, you can either go there yourself to 765 Pampas Lane (across from the Stanford Federal Credit Union; the C shuttle to California Avenue stops nearby), or you can page the item for delivery to the Math/CS Library (or any other branch of your choice). All SAL3 items must be paged.

To page an item from SAL1&2 or SAL3, search for the book or journal in Socrates, click on the "Request this item" link, and fill out the form. Requests for items from SAL1&2 submitted before 1 p.m., Monday - Thursday, will usually be available for pick up on the next day after 11 a.m. at the Math/CS Library. Requests placed after 1 p.m. on Thursday will be available for pickup the following Monday after 11 a.m. Requests submitted after 1 p.m. on Friday or on weekends will be available the following Tuesday after 11 a.m. Items from SAL3 generally take an extra day. You will receive a pickup notice via email or U.S. mail when the item is available.

### Interlibrary Services

If a Stanford University library doesn't have the book, dissertation, technical report, or journal you need, you can request that the library get a copy of the article or borrow the item from elsewhere. Request forms are available online at:

<https://www.stanford.edu/group/ic/cgi-bin/drupal2/node/31>

(SUNet ID required). Or go to the Math/CS Library's Web page and click on "Interlibrary Services" where you will find a link to the forms.

If the item is available at UC Berkeley, you can request the item yourself using the online RLCP forms (graduate students and faculty only). Only use these forms to request items that the Stanford libraries do not own. To search UC Berkeley's online catalog (OSKICAT), go to: <http://oskicat.berkeley.edu/>.

### Suggesting books or journals for the library

Is there a book that you think the library should have in its collection? Is there a journal that you think the library should subscribe to? You can recommend a book or journal to be purchased for the library online at

<http://library.stanford.edu/newitem> (SUNet ID required).

You can also link to this form from the Math/CS Library home page, or the Socrates home page.

However, you may still continue to send your recommendations and comments directly to Linda Yamamoto at [linday@stanford.edu](mailto:linday@stanford.edu).

### We're here to help

For questions and comments about these and any other library resources, including tours and instruction, feel free to contact Linda Yamamoto at the Math/CS Library, [linday@stanford.edu](mailto:linday@stanford.edu), x3-0864, or stop by the library and we'll do our best to help you find what you need.