

Physics 2500

Guide Information

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Information Resources In Physics

The Basics

Part of your work in this class will require you to search the physics literature to identify journal articles that support work you are doing in your labs or other assignments. The "Databases" tab lists good sites for you to use to find journal articles. The "Journals" tab lists information about journals in the Merrill-Cazier Library.

You will be expected to read and cite *peer reviewed* articles. These are articles that have been read by other experts in the field prior to being accepted for publication in a journal. This is done to insure the published work is reliable and sound.

Sometimes it is not easy to tell if a journal publishes peer-reviewed articles. You can always contact me (email me the article or citation) and I can usually tell you very quickly, or you can use the table below to help determine if the article is from a peer-reviewed journal.

Scholarly vs. Popular

	Scholarly	Popular
Bibliography	yes	not usually
Author	noted expert or professional; credentials provided	journalist, student, or not listed
Reading Level	advanced, often with specialized vocabulary or jargon	easy to read
Purpose	give information in a specific field; report research findings	general overview, opinions, general information
Article submission	articles are reviewed by peers; editor and editorial staff are experts in the field and generally work at a variety of institutions	articles written by staff of the magazine or newspaper; editor and editorial staff work for the magazine

Article format	often very structured, with sections such as abstract, introduction, methods, results, and discussion	articles do not necessarily follow a set structure or format
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Journals

Electronic Journals

- Full Text Electronic Journals
<http://xz6kg9rb2j.search.serialssolutions.com/>
Click here to see if the library has electronic access to a journal.

Journal Archives

arXiv.org


A pioneer that contributed to the establishment of the open access movement, arXiv.org was originally started in 1991 at the Los Alamos National Laboratory and was first referred to as the Los Alamos National Laboratory Preprint Archive. Initially limited to physics, it has since expanded to include physics, mathematics, computer science, nonlinear science, quantitative biology, and statistics. Researchers often upload their papers to the archive prior to their publication in peer-reviewed journals. It contains over 500,000 articles.

Now hosted at Cornell University Library, the archive continues to grow and is [supported](#) by a number of on institutions, including the Merrill-Cazier Library at Utah State University.

This can be a great place to search, since you'll find the full text of the articles within the database.

Major Publishers of Physics Journals

The Merrill-Cazier Library provides access to journals from the major publishers of physics journals, including:

- American Institute of Physics
<http://dist.lib.usu.edu/login?url=http://librarians.aip.org/titles.html>
AIP is a not for profit agency that publishes some of the leading journals in physics. This link takes you to a page that provides the impact factors for the AIP journals as well as access to links to the journals.

- American Physical Society
<http://dist.lib.usu.edu/login?url=http://publish.aps.org/>

This is the world's second largest organization of physicists and this group publishes some of the most respected journals in the field. This link provides access to Physical Review, Physical Review Letters, and other APS journals, including a deep archive.



- IEEE/ET Electronic Library (IEL)

<http://dist.lib.usu.edu/login?url=http://www.ieee.org/ieeexplore>

Full text journals, proceedings, and standards from the Institute of Electrical and Electronics Engineers. Coverage goes back to 1988.



- Elsevier

http://dist.lib.usu.edu/login?url=http://www.elsevier.com/wps/find/subject_journal_browse.cws_home/P12?SH1Code=P12&showProducts=Y

As a leading publisher in the sciences, Elsevier publishes about 175 journals in the field of physics. Merrill-Cazier Library has access to most of the current issues through the Science Direct Freedom Collection.



- Springer

<http://dist.lib.usu.edu/login?url=http://www.springerlink.com/physics-and-astronomy/journals/>

They offer 167 journals in Physics and Astronomy. Merrill-Cazier library has access to most of the current issues through joint purchase with the Greater Western Library Alliance (GWLA). If you cannot access a title that you feel we should have, please contact me



- Wiley

<http://dist.lib.usu.edu/login?url=http://onlinelibrary.wiley.com/subject/code/000098/titles?type=journal&activeLetter=>

Another leading publisher in the sciences, Wiley recently purchased Blackwell Publishing and now carries their titles as well. They publish over 130 titles in physics. Merrill-Cazier library has access to most of the current issues through joint purchase with the Greater Western Library Alliance (GWLA). If you cannot access a title that you feel we should have, please contact me.



Institute of Physics Journals

IOP offers over 60 journal on their platform. Merrill-Cazier Library, through a consortial purchase with the Utah Academic Library Consortia, provides access to the following titles:

- Astronomical journal

<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1538-3881>

- Astrophysical Journal

<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0004-637X>

- Astrophysical journal supplement series

<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0067-0049>

- Chinese Physics B

<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1674-1056>

- Chinese Physics Letters

<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0256-307X>

- Classical and quantum gravity

<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0264-9381>

- Environmental Research Letters
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1748-9326>
- EPL (Europhysics Letters)
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0295-5075>
- European journal of physics
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0143-0807>
- Inverse Problems
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0266-5611>
- Journal of Cosmology and Astroparticle Physics
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1475-7516>
- Journal of geophysics and engineering
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1742-2140>
- Journal of Micromechanics and Microengineering
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0960-1317>
- Journal of neural engineering
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1741-2552>
- Journal of physics. A, Mathematical and theoretical
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1751-8121>
- Journal of physics. B, Atomic, molecular, and optical physics
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0953-4075>
- Journal of physics. Condensed matter
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0953-8984>
- Journal of physics. D, Applied physics
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0022-3727>
- Journal of physics. G, Nuclear and particle physics
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0954-3899>
- Journal of Physics: Conference Series
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1742-6596>
- Journal of Radiological Protection
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0952-4746>
- Journal of Statistical Mechanics: Theory and Experiment
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1742-5468>
- Measurement science & technology
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0957-0233>
- Modelling and Simulation in Materials Science and Engineering






<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0965-0393>

- Nanotechnology
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0957-4484>
- New Journal of Physics
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1367-2630>
- Nonlinearity
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0951-7715>
- Nuclear fusion
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0029-5515>
- Physica scripta
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1402-4896>
- Physica scripta. T
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1402-4896>
- Physical biology
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1478-3975>
- Physics education
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0031-9120>
- Physics in medicine & biology
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0031-9155>
- Physics-Uspekhi
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1063-7869>
- Plasma physics and controlled fusion
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0741-3335>
- Plasma Science and Technology
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1009-0630>
- Reports on progress in physics
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0034-4885>
- Russian Chemical Reviews
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0036-021X>
- Science and Technology of Advanced Materials
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/1468-6996>
- Semiconductor Science and Technology
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0268-1242>
- Smart Materials and Structures
<http://dist.lib.usu.edu/login?url=http://iopscience.iop.org/0964-1726>
- Superconductor science & technology

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Databases

Databases

- Google Scholar
<http://scholar.google.com/>
Google Scholar searches very broadly across the literature, but if you utilize the advanced search features you can hone your search nicely. Google Scholar offers a "cited by" feature, similar to what Web of Science does, but the two cannot be compared side by side due to differences in indexing practices.

- Web of Science
<http://dist.lib.usu.edu/login?url=http://dist.lib.usu.edu/login?url=http://www.isiknowledge.com/?DestApp=WOS>
The Web of Science contains three citation indexes that are searched simultaneously: Science, Social Sciences, and Arts & Humanities. The Science Citation Index indexes only 6,650 journals, but only those journals considered to be the top journals are included. The greatest strength of the database is that it includes cited references and it allows you to perform cited reference searching. For example, you can identify authors who have cited a particular paper. Coverage goes back to 1975.

- SAO/NASA Astrophysics Data System (ADS)
<http://www.adsabs.harvard.edu/>
Operated by the Smithsonian Astrophysical Observatory (SAO) under a NASA grant, this database contains over 8.6 million records, including bibliographic citations and arXiv e-prints. The search interface offers advanced features, although the interface is not as user friendly as some. This a great place resource, and it is freely available to all users!

- SciFinder Scholar (Chemical Abstracts)
<http://dist.lib.usu.edu/login?url=http://library.usu.edu/elecres/scifinderscholar/index.php>
This is the premier database for articles, conference papers, patents, and more in chemistry and related areas. Coverage is from 1907 to the present. Users must create an account to log in (log in at <http://scifinder.cas.org>)

- Digital Dissertations
<http://dist.lib.usu.edu/login?url=http://proquest.umi.com/login?COPT=REJTPTNiMGYmSU5UPTAmVkvSPTI=&clientId=1652>
Search this database to located theses and dissertations from North American and many European universities.


Settings in Google Scholar for USU Resources

1. Open [Google Scholar](#).
2. Click the **Scholar Preferences** link.



3. Scroll down the resulting page to **Library Links**.

4. Type **Utah State University** and click **Find Library**.
5. Check to make sure that "Utah State University - Full-Text @ Utah State" appears and the box is checked.

6. After you run a search, on your results page you should see a link titled Full Text @ USU to the right of any articles for which the USU libraries have an electronic subscription. Clicking this link will take you a page with links to the full text and the option to enter your A number and banner password to gain access to the article from off-campus.



Please [contact a librarian](#) if you have any questions.

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Citing Your Sources

AIP Style

You are required to use the AIP Style when writing and citing sources in physics. AIP provides a [PDF of their manual](#) for download at their site. Their manual provides you with a great overview of how to prepare your manuscript.

Managing Your Citations

One of the challenges you will face is how to manage the citations to the journal articles you read and need to cite. There are several tools available to you to assist with this. Two popular options are End Note Web and Zotero. The links below will take you to in-dept guides that will step you through the process of how to use these powerful resources.

NOTE: For Zotero, you will need to download the AIP style from [here](#) and install it in order to format according to AIP style.

[EndNote for Organizing Citations](#) - Published on Jan 8th, 2008 by [Ref Reference](#)

Find information and guides for using EndNote, a software program that stores and organizes citations, and enables you to import citations directly into a Word document.

[Zotero](#) - Published on Sep 15th, 2009 by [Flora Shrode](#)
free, flexible citation management tool (Firefox plug-in)

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Finding the information

Connecting from Off-Campus

You can access most of the library databases (article collections), e-journals and electronic books from anywhere in the world. But, you need to first "prove" that you are affiliated with Utah State logging into EZProxy with your A-number and password.

- Contact Information for Help
http://library.usu.edu/electres/off_campus.php

Please contact me or the library's e-resources librarian (contact info via the above link) if you need help.



What if it's not available electronically?

Once in a while, you do need to obtain an article from (gasp) a print journal! In these instances, you need to search the online catalog to see if the Library has the journal you need, and then you will need to request the volume you need from the BARN. The tutorial below will explain how this is done using the Library's Article Linker tool.

Finding Articles in Print

Getting Articles USU Doesn't Own

Articles Available Through Interlibrary Loan

Let's look at your options when you find an article in a magazine or journal the library doesn't subscribe to.

1. As an example, you have found the following information in an article database, which is an article from the journal News Photographer. Click the Article Linker button linker.



Untainted *Images* Aim To Present The World As It Is. 
By: Zibluk, John B. (Jack); Long, John. *News Photographer*, Sep2004,
Database: Academic Search Premier
 [Add to folder](#)
ARTICLE LINKER [Check for full text access or print availability.](#)

2. After you click the Article Linker button, Step 1 is missing. After the citation information, you see "Step 2 Search the Library Catalog." Click By Journal Title to search the library catalog and find out if we have a print subscription to the journal for the date that you need.



Article is Not Available Online. Proceed to Step 2.

Step 2 - Search the Library Catalog:

[By Journal Title](#)
[By ISSN](#)
[By Book](#)

3. In this case, the journal title is News Photographer. The search did not find a subscription for the journal News Photographer; the catalog displays similar titles instead.



Catalog Browse by Periodical Title: "News photographer"

[News, or The full particulars of the last fight](#)

[News Post Leader](#)

[News Post Leader \(JONSON\)](#)

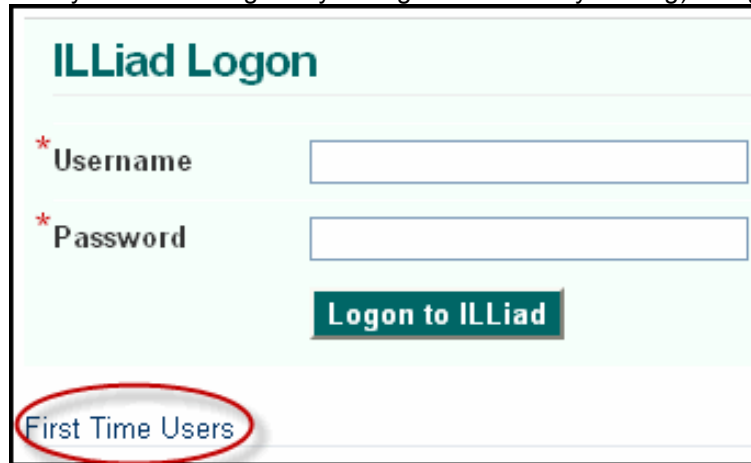
[News Press](#)

4. Return to the web page that opened up when you clicked Article Linker; this is the page where you clicked By Journal Title to search the library catalog. Scroll down to Step 3 and click Request this material through Interlibrary Services.

Step 3 - Unavailable at USU?

[Request this material through Interlibrary Services](#)

5. You can now request a copy of the article via Interlibrary Loan. Click **First Time Users** if you don't have an account in the Interlibrary Services program (this is different from your Banner login or your login to the library catalog) or log-on to the Interlibrary Loan system and follow the instructions to request the article.



ILLiad Logon

* Username

* Password

Logon to ILLiad

[First Time Users](#)

Other Options

If you have a citation for an article, you can find full-text copies of articles to which we have an electronic subscription by searching for the journal in the [E-Journals database](#).

You can [order copies of articles](#) if you are a Regional Campus or distance education student (living outside Cache Valley).

Please [contact a librarian](#) if you need further assistance.

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