

The background of the slide features a low-angle shot of cherry blossom trees in full bloom, with their branches and light-colored flowers filling the upper and left portions of the frame. To the right, a modern, multi-story building with a grid-like facade is visible against a clear blue sky with a few wispy clouds. The overall scene is bright and clear, suggesting a sunny day.

Academic Information Literacy for Bachelor's and Master's Theses

**Science & Engineering Library
Waseda University
5th April 2010**

Contents

- 1. Academic Information Literacy
(Science & Engineering Library)**
- 2. Web of Science user guide
(Thomson Reuters)**
- 3. SciFinder Scholar user guide
(Japan Association for International
Chemical Information)**

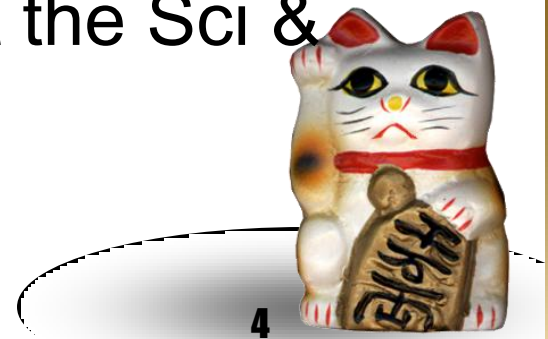
Academic Information Literacy

**Take advantage of WU's academic
information resources**

**Science & Engineering Library
Waseda University**

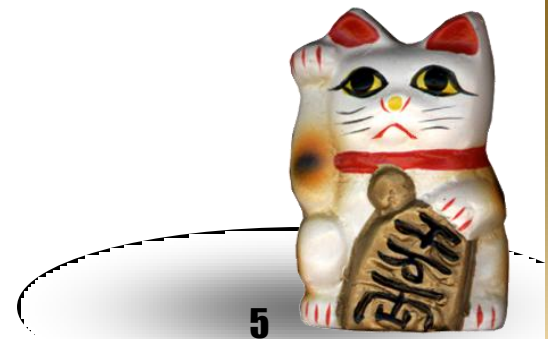
Contents

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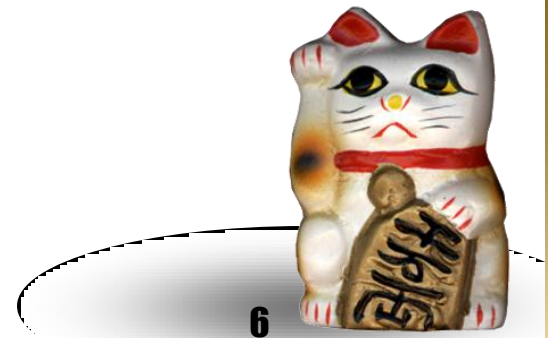
1. Research activities and academic information

- (1) Selecting and deciding on a research theme
Searching for past and the most recent
academic information
- (2) Research activities: experiments, studies, analyses, etc.
Investigating academic articles / collecting factual data
- (3) Compiling and presenting results (**academic papers**)
Academic society journals, conference presentations (proceedings), theses, technical reports, patents
- (4) Accumulating results
Databases



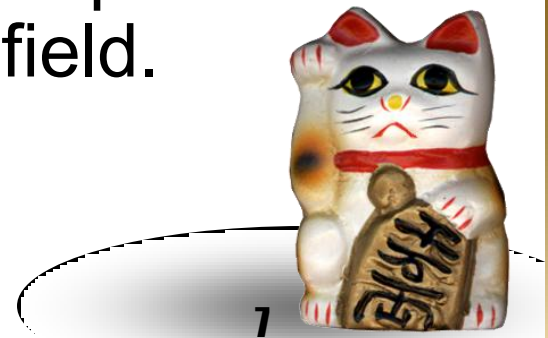
1.1. How to find relevant academic papers

1. Search sequentially for the literature you need for your research from “References” listed at the end of books and articles.
2. Use databases to look systematically and quickly for academic articles on your theme. Read the abstracts to select the literature you need for your research.



1.2. What is “References” ?

- ❁ At the end of academic articles is a list of literature (references) the paper’s author either cited or referred to in the writing of the work.
- ❁ Much of the literature in reference lists is essential reading for anyone engaged in research on the same or similar theme.
- ❁ The style of notating references depends on the research field and the academic journal. It is imperative that you become acquainted with the referencing style in your field.



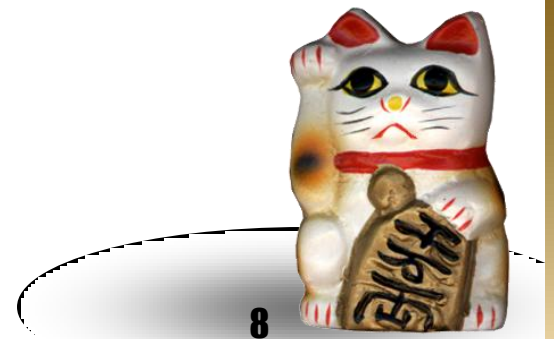
1.3. Bibliography example

(in Japanese)

- 稲葉雅幸、岡田慧、水内郁夫、稲邑哲也著「ヒューマノイドロボットのシステム実現ーロボットシステム記述言語EusLispによる実装ー」

『コンピュータソフトウェア』、23巻2号、2006年、pp. 45-61.

論文末尾pp. 60-61に「**参考文献**」あり。



1.3. Reading bibliographies

★Book example (in Japanese)

[3] 稲葉雅幸, 加賀美聡, 西脇光一 : ロボットアナトミー,

Author s

Title

岩波講座 ロボット学 7, 岩波書店, 2005.

Series title

Vol.

Publisher

Year of publication

★Journal article example (in Japanese)

[5] 稲葉雅幸 : ロボット研究の方法論, 人工知能学会誌,

Article author *Article title*

Periodical title

Vol.10, No.5 (1995), pp. 697-703.

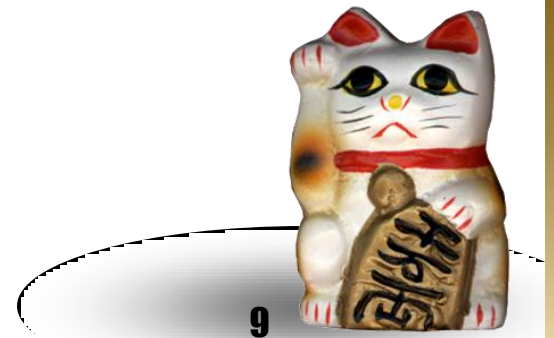
Vol.

no.

Year of

Pages

publication



1.3. Reading bibliographies

★Journal article example (in English)

[4] Matsui, T. and Inaba, M.: EusLisp: An Object-Based

Authors

Article title

Implementation of Lisp, Journal of Information Processing,

Journal title

Vol. 13, No.3 (1990), pp.327-338.

Vol. No. Year of Pages
publication

★Abbreviated bibliography example

J.Kido, Appl. Phys. Lett. 73, 2866 (1998)

Author, J.title (abbreviated), Vol, Starting page, (Y of publication)



1.4. Abbreviated journal titles

❁ Periodical titles are often abbreviated.

For example, a search of “*Appl. Phys. Lett.*” on WINE or NACISIS Webcat will show that its full title is *Applied Physics Letters* which you must know to find an article. However, not all abbreviated titles can be retrieved in this manner, and there are some variations in abbreviation methods which also complicates searches.

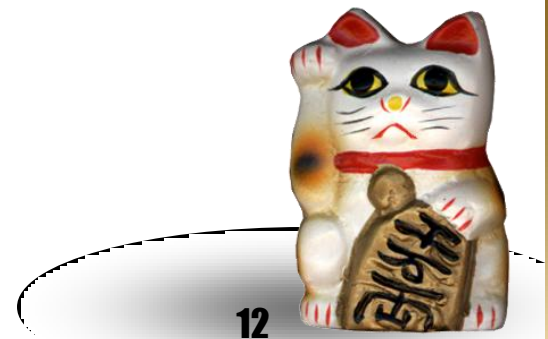
❁ The abbreviated titles are largely settled in their respective research field.

Acronym Finder of Wiley InterScience is a useful tool for looking them up: <http://www3.interscience.wiley.com/>



2. Using academic journals

- Science and engineering articles in academic journals are published by academic societies and academic presses.
- Western academic societies and academic presses issue an overwhelming number and variety of journals; it is important to remember the titles in your relevant field.
- Science and engineering periodicals are provided in both print and digital versions, but in recent years online journals available via the Internet are the most common distribution method.



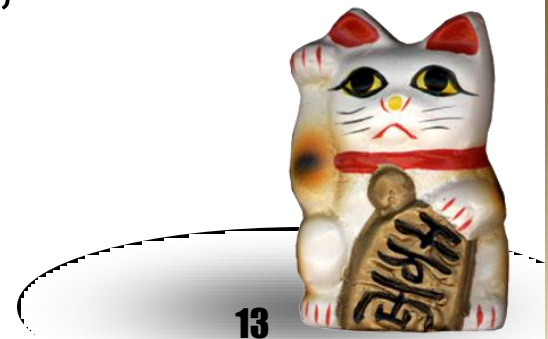
2.1. Searching for academic journals

1. Search the WU Library collections.

The journals you need for your research are not always kept at the Sci & Eng Lib.

2. If you can't find the periodical at Waseda, search for owning libraries in Japan.

3. If you still can't locate it in Japan, look for owning libraries abroad.



2.2. Searching for journals in WU

WINE <http://wine.wul.waseda.ac.jp/> :

- enables you to retrieve both printed and digital journals held anywhere in the WU Libraries.
- includes all journals in the Sci & Eng Lib.
- ❁ Old periodicals held at the Honjo Deposit Library are:
 - * Some Japanese journals (discontinued journals, rarely used journals, and back issues of university bulletins)
 - * Foreign periodicals mostly published before 1972
 - * Print versions of foreign journals that are also digitally archived.



2.3. Retrieving journals NOT kept at WU Libraries

- ❁ NACSIS Webcat http://webcat.nii.ac.jp/webcat_eng.html
 - lists journals/periodicals held at the libraries of universities and other institutions across the country.
 - After searching by the journal title, you can check which libraries own the issue you need.

- ❁ When you can't find the periodical on NACSIS Webcat:
 - 1) NDL-OPAC [National Diet Library]
http://opac.ndl.go.jp/index_e.html

From the front page select Search for General Materials (Basic), check the type of materials, and search. (Note that Books (Jpn.) is selected as the type of materials by default.)
 - 2) JST Holdings Catalogue <http://opac.jst.go.jp/>

permits searches of materials held by the Japan Science and Technology Agency. Includes materials listed on "JDream II".

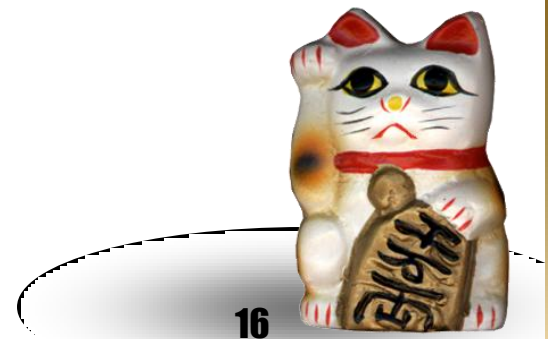


2.4. Searching for journals not available in Japan

- The British Library

http://catalogue.bl.uk/F/?func=file&file_name=login-bl-list

System for searching the British Library's collections, listing 14 million items. The British Library has one of the world's most extensive collections of science and technology periodicals. You can request and obtain photocopies of journal articles for a fee.



2.5 Using online journals

- ❁ Online journals, electronic journals, or e-journals are journals that can be read entirely on the Internet.
- ❁ Sci & Eng Lib has switched to the online version for many of its overseas periodicals. As a result, many recent journals issues are only available online.
- ❁ The e-journals that Waseda subscribes to are available only to the WU faculty members and students. They can be viewed on the University network.
- ❁ There are a number of rules you should review carefully before using online journals.

http://www.wul.waseda.ac.jp/db/db_notice-e.html



2.6. Advantages of e-journals

- ❁ No time lag in obtaining journals.
- ❁ Articles can be read on the Web before the print copy is issued.
- ❁ No need to wait for journals that are in use by others or being bound.
- ❁ In many cases, you can jump directly to the full text of references listed in the end of an journal article.
- ❁ An increasing number of full-text articles are accessible directly from databases.
- ❁ Articles can be accessed anytime from laboratories or campus terminals.
- ❁ Papers can be read off campus via the library's server ("Off-Campus Access" service)



2.7 Accessing online journals

- **Links to e-journals in WINE**

You can access e-journals by searching WINE for the journal title. Select records with “WEB” after the title in the search results.

<http://wine.wul.waseda.ac.jp/search/>

- **Use the “Access to Academic Information” page on the Library’s Web site**

This is a unified search site of the e-journals and databases subscribed to by the University. You can narrow searches to specific databases.

<http://www.wul.waseda.ac.jp/imas/index-e.html>

- **The Waseda Portal for Online Journals**

This portal lets you search e-journals available throughout WU. Easy to access to both current and archived issues. Field-specific lists of journals are also provided. The site is linked from the "Access to Academic Information" page.

<http://tm3xa4ur3u.search.serialssolutions.com/>



2.8 Major e-journal aggregation sites

By publisher (limited to the WU network)

- **ScienceDirect** [Elsevier Science] *about 2,000 journals*
World's largest publisher of natural science journals.
- **SpringerLink** [Springer] *about 1,600 journals*
No. 2 natural sciences publisher, after Elsevier, and the world's largest book publisher.
- **informaworld** [Taylor & Francis] *about 250 journals in the natural sciences and about 950 journals in the social sciences and humanities*
Largest academic publisher in the United Kingdom.
- **InterScience** [Wiley-Blackwell] *about 700 journals in the natural sciences and about 700 journals in the social sciences and humanities*
A natural sciences publisher specializing in medicine and life sciences.



2.8 Major e-journal aggregation sites

By publisher (limited to WU network)

Nature Publishing Group 17 journals

❁ *Nature*

14 *Nature* sister journals

(Nature Biotechnology, Nature Cell Biology, Nature Chemical Biology, Nature Chemistry, Nature Digest, Nature Genetics, Nature Materials, Nature Medicine, Nature Methods, Nature Nanotechnology, Nature Physics, Nature Reviews Molecular Cell Biology, Nature Structural and Molecular Biology, Polymer Journal)

EMBO Journal and EMBO Report

❁ American Association for the Advancement of Science (AAAS) 1 journal

ScienceOnline from the publisher of *Science*



2.9. Major e-journal aggregation sites

By field (limited to WU network) Only journals subscribed to by WU can be used

Field	Society	Web Site
Mathematical science	American Mathematical Society (AMS)	http://www.ams.org/journals/
	Society for Industrial and Applied Mathematics (SIAM)	http://epubs.siam.org/
Physics and applied physics	American Physical Society (APS)	http://publish.aps.org/
	American Institute of Physics (AIP)	http://www.aip.org/ojs/service.html
	Institute of Physics (IoP)	<i>IoP Science</i> http://journals.iop.org/
	Japan Society of Applied Physics (JSAP)	http://www.jsap.or.jp/english/journals/index.html
	Physical Society of Japan (JPS)	http://jpsj.ipap.jp/



2.9. Major e-journal aggregation sites

By field (limited to WU network) Only journals subscribed to by WU can be used

Field	Society	Web Site
Chemistry and applied chemistry	American Chemical Society (ACS)	<i>ACS Journal Archives/ACS Web Edition</i> http://pubs.acs.org/action/showPublications?display=journals
	Royal Society of Chemistry (RSC)	http://www.rsc.org/Publishing/Journals/Index.asp
	Chemical Society of Japan (CSJ)	http://www.chemistry.or.jp/journals/index.html
Materials science	Materials Research Society (MRS)	http://www.mrs.org/s_mrs/sec.asp?CID=11&DID=16
Electrical, electronics, and computers	Institute of Electrical and Electronics Engineers (IEEE), Institution of Electrical Engineers (IEE)	<i>IEEE/IEE Xplore</i> http://ieeexplore.ieee.org/Xplore/DynWel.jsp
Computers	Association for Computing Machinery (ACM)	<i>ACM Digital Library</i> http://portal.acm.org/



2.9. Major e-journal aggregation sites

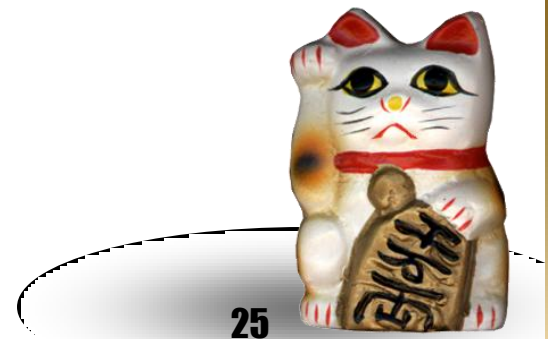
By field (limited to WU network) Only journals subscribed to by WU can be used

Field	Society	Web Site
Mechanical engineering	American Society Of Mechanical Engineers (ASME)	<i>ASME Digital Library</i> http://www.asme.org/pubs/journals/index.html
Earth sciences	American Geological Institute	<i>GeoScience World</i> http://www.geoscienceworld.org/
Geophysics	American Geophysical Union (AGU)	http://www.agu.org/pubs/journals/
Civil and Environmental Engineering	American Society of Civil Engineers (ASCE)	http://pubs.asce.org/journals/jrns.html !



3 Searching science and engineering academic papers

- ❁ Make your searches for academic papers more efficient by using databases that target all science and engineering fields. You can reliably find important articles from abstracts, citation frequencies, relevant literature, and other information
- Follow established etiquette when using databases as with e-journals.



3.1 Searching databases

- JDream II (Japan Science and Technology Agency : JST)

(Limited to WU network; no off-campus access)

Able to search bibliographies on science and technology, medicine, and patents issued in Japan and abroad. Provides keyword, author, journal title, and other types of searches. Includes Japanese abstracts.



3.2 Searching for science and engineering information on free sites

■ Scitation

A comprehensive search site for e-journals provided by the American Institute of Physics and related societies. Abstracts are free to view; article texts can be viewed with a subscription to the relevant journal. <http://scitation.aip.org/search.jsp>

■ SCIRUS for scientific information

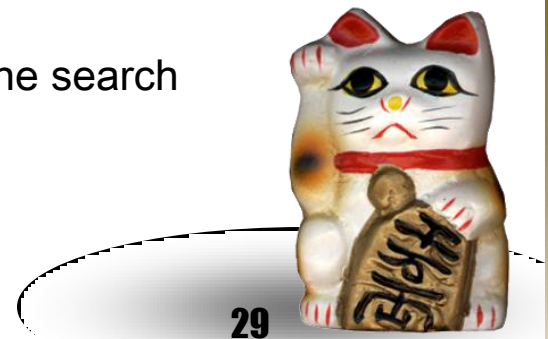
A free site for searching all scientific information provided by Elsevier. Science and engineering articles can also be found. Provides links to online journals. <http://www.scirus.com/srsapp/>

■ Intute

A site for searching information released by JISC, the UK's Joint Information Systems Committee. With assistance from the Arts & Humanities Research Council (AHRC) and the Economic and Social Research Council (ESRC), you can search fields such as [Science and Technology / Arts and Humanities / Social Sciences / Health and Life Sciences](#). Continues and expands EEVL. <http://http://www.intute.ac.uk/terms.html>

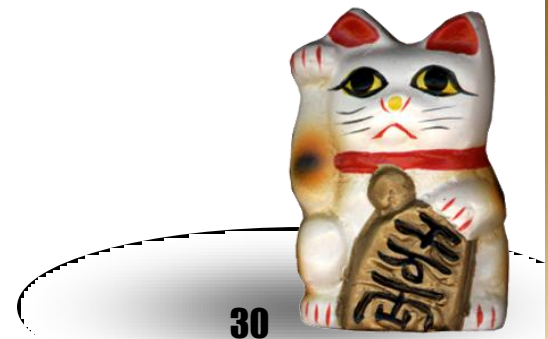
■ Google Scholar

A free site for searching academic information provided by the search engine company Google. <http://scholar.google.com/>



4 Field-specific databases

- In the science and engineering field, there are many databases concentrating on specific areas. Some are provided on the University network and some are freely accessible to anyone. Try using these databases after getting to know the characteristics of each one.



4.1 Mathematical science

- **MathSciNet** (*Limited to WU network*)

Online version of the *Mathematical Reviews* and *Current Mathematical Publications* both published by the American Mathematical Society.

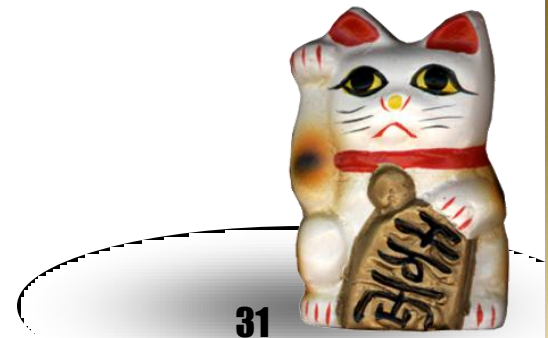
A database covering about 1,800 mathematics journals. Provides author, article title, keyword, and journal title searches and links to online journals.

<http://www.ams.org/mathscinet/>

- **Project Euclid** (*Free site*)

A journal article search system of publications from mathematics societies provided by the Cornell University Library. Includes some full articles that can be downloaded.

<http://http://projecteuclid.org/DPubS?Service=UI&version=1.0&verb=Display&handle=euclid&page=browse>



4.2 Physics and applied physics

- The NASA Astrophysics Data System

Free site

An astrophysics reference system constructed by NASA.

<http://www.adsabs.harvard.edu/>

- CERN Scientific Information Service

Free site

Physics information provided by the European Organization for Nuclear Research (CERN).

<http://library.cern.ch/index.html>



4.3 Chemistry, applied chemistry, and other sciences

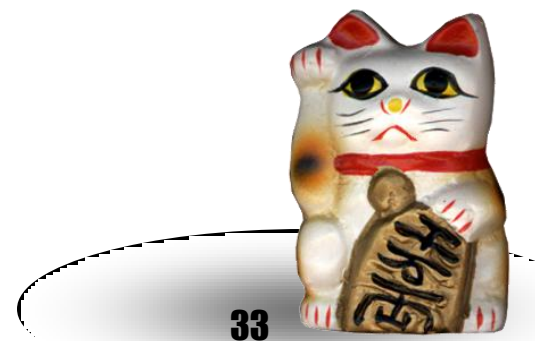
■ SciFinder Academy

Limited to WU network

Online and expanded version of *Chemical Abstracts* (CA) published by the American Chemical Society. Permits searches of bibliographic references, chemical substances, organic chemistry reactions, commercial chemical product catalogs, regulations on chemicals, and medical references. Provides many links to e-journals.

WU takes applications for use of this database on a per-laboratory basis. Consult with your supervising professor before applying for use.

<http://www.wul.waseda.ac.jp/RIKOU/SciFinder/scifinder.html>

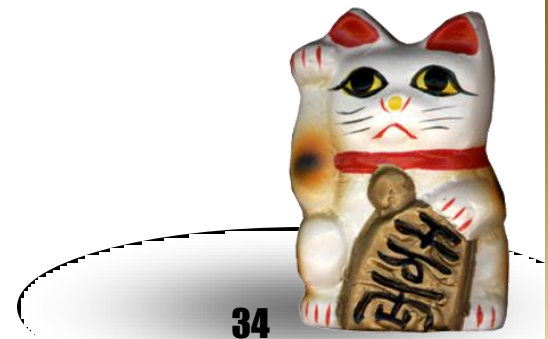


4.4 Materials science

- *Ceramic Abstracts*

Booklet

Ceramics-related bibliographic information journal compiled by the American Ceramic Society. Issues can be found in the B2 North reading room in the Sci & Eng Lib. The most recent issue is kept in the new acquisitions section.



4.5 Mechanical engineering

- *Applied Mechanics Reviews*

The American Society of Mechanical Engineers compiles this journal of bibliographic information related to mechanical engineering. Sci & Eng Lib has print version running until 2007. Since 2001, it has been possible to read abstracts and full articles (of subscribed-to journals only) online.

<http://scitation.aip.org/ASMEJournals/AMR/>



4.6 Earth sciences

- ***GeoRef***

Limited to WU network

A database provided by the American Geological Institute. Provides links to the online *GeoScience World* journal.

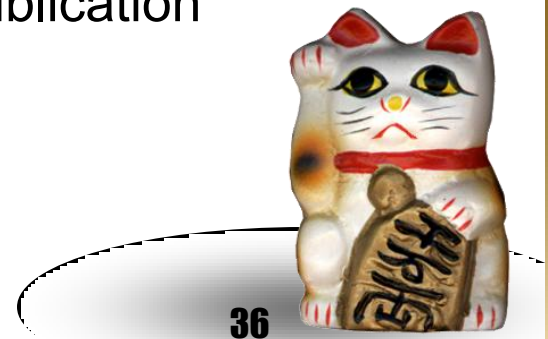
<http://www.geoscienceworld.org/>

- ***MINABS Online***

Limited to WU network

Online version of *Mineralogical Abstracts* published by the Mineralogical Society of Great Britain & Ireland. Indexes the leading journals in mineralogy, crystallography, earth sciences, petrology, and environmental mineralogy. Able to search articles between 1982 and 2008. (Publication ceased in 2008.)

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



4.7 Environment and energy

- **INIS Database**

Limited to WU network

An international nuclear energy information system constructed by the International Atomic Energy Agency (IAEA) for the peaceful use of nuclear energy.

Provides author, subject, and keyword searches, abstracts of articles, and JST holdings information.

<http://inisdb.iaea.org/inis/php/index.php>

- **Energy Citations Database (ECD)**

Free site

Search system of energy-related literature since 1948 provided by the U.S. Department of Energy.

<http://www.osti.gov/energycitations/>



4.8 Medicine and life sciences

- PubMedCentral

Free site

The U.S. National Institutes of Health free digital archive of biomedical and life sciences journal literature with numerous links to free e-journals.

<http://www.pubmedcentral.nih.gov/>

- ELbis UMIN Medical and Biology Electronic Library

Free site

Search site of medical, dentistry, and pharmaceutical-related bibliographies provided by Japan's University Hospital Medical Information Network.

<http://endai.umin.ac.jp/endai/fulltext/>



5 Specialised materials

Type of Materials	Terms Used in Bibliographies	Notation Example
Conference Proceedings	Proceedings (Proc.) Conference (Conf.) Symposium (Symp.)	Proc. 12th Int. Conf. Cryst. Growth Annu Conf IEEE Ind Electron Soc
Technical reports	Report IDs are combinations of letters and numbers	ORNL-TM1501
Theses and dissertations	Thesis (plural, Theses) Dissertation (Diss.)	M.D. Thesis Ph.D. Diss.
Patents	Patent (Pat.) Country code (JP, WO, EP, US, etc.) Published standard (特開)	US Pat.5,625,035 JP11001729 特開平10-123456
Standards	Standard (Stand.) Abbreviated name(JIS, ISO, EN, ANSI, ASTM)	ASTM Stand. D 2487 ISO 9000



5.1 Conference proceedings

- ❁ Conference proceedings are minutes of presentations at academic conferences and symposiums held by academic societies and research groups.
- ❁ Conferences have an important position in the natural sciences because of the timely nature of the presented information.
- ❁ Proceedings are published or released without peer reviews.
- ❁ Proceedings are often published as special issues or supplements to books or journals (especially in the case of international conferences).
- ❁ Example: 島田良幸. 平成13年度秋季大会粉体粉末冶金協会講演概要集, 1-11B, (2001)

Author *Name and Date of the conf.(proc.)*

島田良幸. 平成13年度秋季大会粉体粉末冶金協会講演概要集, 1-11B, (2001)

Lecture no . Year of presentation



5.2 Technical reports

Characteristics of technical reports

- ❁ Individual report numbering schemes
- ❁ Published irregularly
- ❁ One article per report
- ❁ Very prompt information
- ❁ No page limits, very detailed
- ❁ Difficult to obtain
- ❁ Issued without peer review, quality and content is a mixed bag

ex.) Dunigan, T. PVM and IP multicast. ORNL/TM-13030,

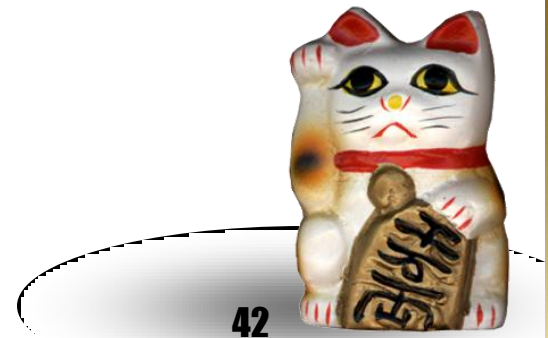
Author

Title

Report no.

1996

Year of publication



5.3 Theses and dissertations

- Theses and dissertations are very detailed and many are highly valued because they have undergone thorough examinations.
- Most are not sold and are difficult to obtain. Stored in bulk by the degree-granting organisation or other collection bodies.

ex.: 沼田雅行. ACNU感受性CHO細胞のDNA修復欠損. 博士論文.

<i>Author</i>	<i>Title</i>	<i>Degree</i>
<u>東北大学,</u>	<u>1993.</u>	
<i>Granting organisation</i>	<i>Year of degree</i>	

ex : McCall,C.R. Selective dissolution... . Ph.D. thesis.

<i>Author</i>	<i>Title</i>	<i>Degree</i>
<u>Arizona St. Univ.,</u>	<u>2002.</u>	
<i>Granting organisation</i>	<i>Year of degree</i>	

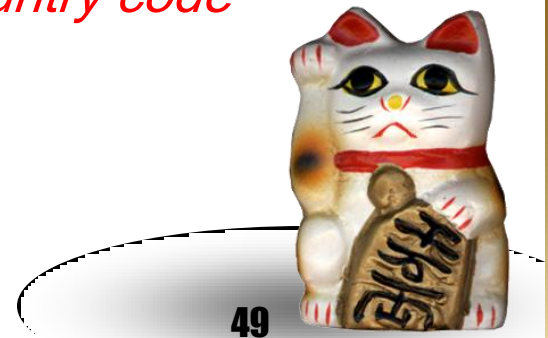


5.4 Patents

- The patent system is intended to grant and protect the inventor's exclusive rights to an invention for a fixed period of time and to encourage further industrial development by making the details of inventions public.
- Patents are important materials for research in many fields, including chemistry, pharmacy, life sciences, and engineering.

ex: 東北大学長. 坂田昌弘ほか. 水素製造方法. 特開平10-251001
Applicant Inventor Invention title Number

ex: A. Inoue, E. Makabe, Process and apparatus..., US pat.
Inventor Invention title Country code
6,427,753, 1999
Number Year



5.5 Standards

Standards are agreements that regulate certain aspects of knowledge, technology, or manufactured goods in order to promote their dissemination as standardised items. Standards define such things as terminology, units, dimensions, quality levels, and processes. Japanese has a number of terms for “standards” — such as *hyoujun*, *kijun*, and *kitei* — depending on the application.

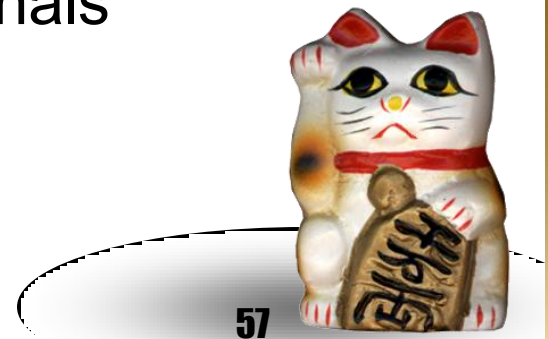
Type	Acronym	Country/Organisation
International standards	ISO	International Organization for Standardization
Regional standards	EN	European Norm
National standards	ANSI	American National Standards Institute
	BS	British Standards Institution
	DIN	Deutsches Institut fur Normung
	JIS	Japan
Industry standards	ASTM	American Society for Testing and Materials
	ASME	American Society of Mechanical Engineers
	IEEE	The Institute of Electrical and Electronics Engineers



6. Saving and managing bibliographic information

What is RefWorks?

1. An online tool for creating and managing bibliography information.
2. Allows you to export records that you discover in bibliography databases directly into RefWorks, where you can store and manage them under your own account.
3. The stored records can be used to automatically create reference lists when writing papers. RefWorks allows you to tailor the style of your bibliography list to match various journals' bibliography styles.



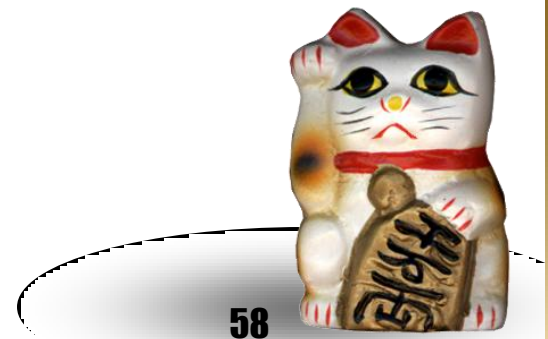
6.1 Using RefWorks

To use RefWorks, you must set up your own ID and password.

Assistance

Learn more about RefWorks through online tutorials.

URL: <http://www.wul.waseda.ac.jp/imas/refworks/index-e.html>



6 Databases compatible with RefWorks

Databases, e-journals, and platforms that allow you to directly export bibliography records to RefWorks

(Note that databases use different export methods.)

- WINE (Waseda University Library's OPAC)
- CiNii (National Institute of Informatics' article navigator)
- Scopus (Elsevier)
- PubMed (U.S. National Institute of Health)
- ACS (American Chemical Society)
- IEEE/Xplore (IEEE/IEE)
- ScienceDirect (Elsevier)
- Wiley InterScience (Wiley), etc.

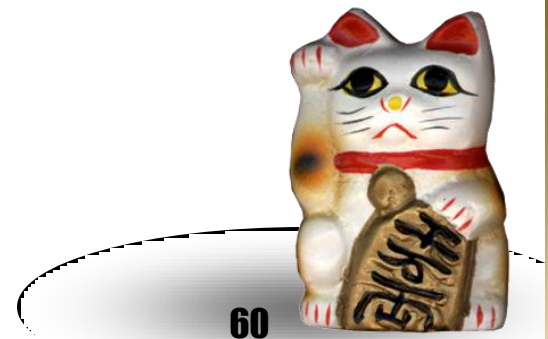
For more details, see the RefWorks [Product Info](#) page.



7. Obtaining literature not held at the Sci & Eng Lib

Using the interlibrary loan (ILL) service, you can obtain literature at other WU Libraries through the Sci & Eng Lib. You can also obtain literature held outside the university.

1. Order copies of books and materials
2. Order loans of books and materials
3. Visit the owning library

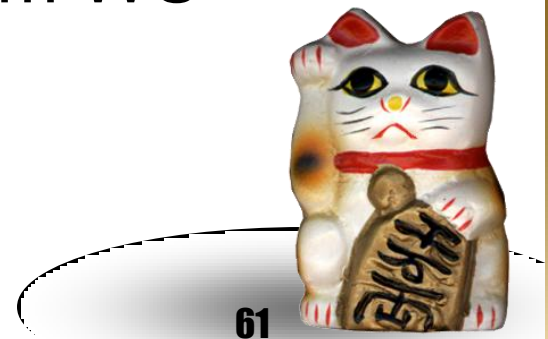


7.1 Order copies of books and materials

Ordering copies applies to the following materials:

- Articles in journals not in the Sci & Eng Lib's collections that are held at the Central Library, Tokorozawa Library, or Toyama Library
- Articles in journals not held at WU

*Excludes e-journals accessible from WU that provide full articles.



7.2 Order loans of books and materials

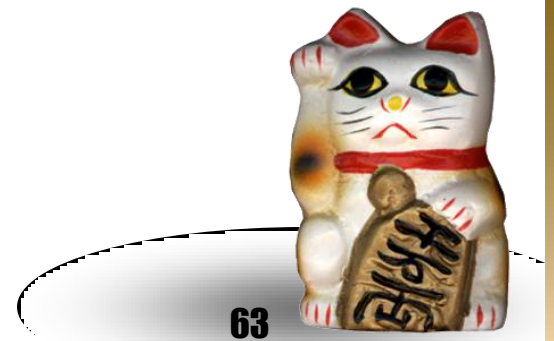
Ordering loans applies to the following materials:

- Journals held by School of Education (all department reference rooms and faculty libraries)
- Journals and doctoral dissertations held at Honjo Deposit Library
- Books at Tokorozawa Library
- Books at the Keio University Library or Doshisha University Library



7.3 How to make ILL requests

- ❁ Online ILL requests (Japanese only)
- On the Waseda-net portal, select System Services > Application > Science & Engineering Library (ILL Request)



7.4 Visit the owning library in person

- You may visit the Keio Univ. Library (which has a visitor agreement with WU, excluding Kyosei-kan Library and Library of Nursing and Medical Care) and most national university libraries and use materials in the libraries by presenting your student card and filling out an entry form. Confirm on the relevant library's Web site before you go that they have the book in question and that visitors are allowed to use the library.
- To use other private university libraries, you must confirm that the library has the book beforehand and you must take a letter of introduction. Ask at the Sci & Eng Lib's reference desk.
- Ask at the Sci & Eng Lib's reference desk about using non-WU libraries.



7.5 Desk hours at the Science & Engineering Library

Desk reception hours (when classes are scheduled)

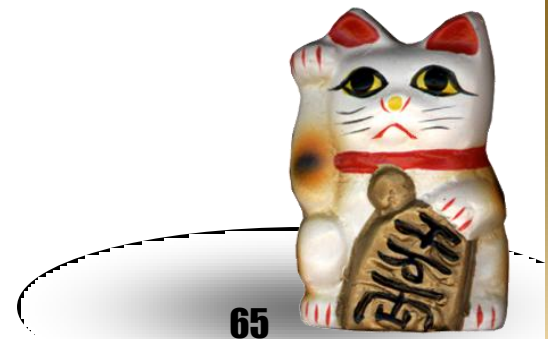
9:30 a.m. to 8:30 p.m., Monday to Friday

9:30 a.m. to 6:30 p.m., Saturdays

Reference desk hours (when classes are scheduled)

10 a.m. to 12:30 p.m. and 1:30 p.m. to 5 p.m.,
Monday to Friday

❁ Inquiries: extension 73-2249
riko-tosho@list.waseda.jp



Summary

1. Proper use of the Library can help you efficiently collect reference materials.
2. Always follow the Library rules and etiquette.
3. Put your bags and personal belongings in a locker and ensure that it is locked before entering the Library.
4. Handle Library materials with care to ensure they are not damaged, soiled, or lost.

