

Databases: Introduction and How to Search



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Aims and objective of this module



- This e-module provides information about
- Databases and their types
- How to search databases systematically to retrieve relevant information.
- Databases available in different disciplines

Definition

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- **Definition**
- A per the *merriam-webster dictionary* a “database is usually large collection of data organized especially for rapid search and retrieval (as by a computer) ”.
- So far library related databases are concerned are the databases which organizes information on particular subject or on different subject areas together.
- Types of E-databases:
- **Full-text database**
Full-text databases contain the whole content of an article such as citation information, text, illustrations, diagrams and tables.
-



- **Bibliographic database**

Bibliographic databases only contain citation information of an article, such as author name, journal title, publication date and page numbers.

- **Citation databases:**

- In a citation database provides information on following aspects
- who has cited an article
- how many times an author has been cited.
- which articles or journals are the most cited ones
- list all articles citing the same source
- etc.

Searching electronic Resources/databases



- Planning a Search Strategy
- Search Strategy - A systematic plan for conducting a search
- Step One - make sure you fully understand question/topic
- Step Two - identify keywords and phrases
- Step Three – identify synonyms and related terms
- Step Four – creating your search statement
- Step Five - start searching
- Step Six – evaluate your search results
- Step Seven - saving searches & taking references

Step One: Fully understand question/topic

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- We should know the exact topic to be covered and related areas to be included,
- For this subject dictionaries and subject encyclopedia are helpful.
- Personal interaction with user is very important ,it helps to know users exact subject requirement and also purpose , scope , coverage , period to be covered for search
- **Example**
- **Fluorescence**

Step Two – Identify keywords and phrases

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- When conducting a search, break down the topic into key concepts. And identify keywords that describe that topic
- For example, user want to find information on popular methods of losing weight.
- Popular , methods , losing, weight

Step Three : Identify synonyms and related terms

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- List synonyms, alternate spellings, and variant word forms of each keyword.
- E.g. Popular methods of losing weight.
- **popular** **common** **favourite**
- **methods** **method** **ways** **way** **techniques**
technique
- **losing** **lose** **reducing** **reduce** **reduction**
- **Weight** **fat** **dieting** **diet**

Step four-Creating your search statement using search features

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- Most of database provides following features for searching
- a) Keyword and Phrase Search
- b) Boolean Search
- c) Truncation
- d) Wild card
- e) Proximity Search
- f) Field specific search

Keyword and Phrase Search

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- **Keyword and Phrase Search:** A search can be conducted by entering single search term or phrase comprising more than one term
- Example weight
- “losing weight”

Boolean operators

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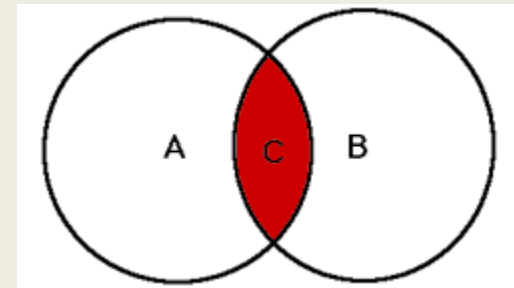
- Boolean Operators help you craft more effective searches through the combination of multiple terms or concepts
- Using Boolean Operators effectively can help produce more accurate and well-defined search results
- Boolean Operators help save time and effort by filtering out unneeded results
- There are three main Boolean Operators: **AND** / **OR** / **NOT**
- It is important to note that the exact Boolean terms used by different databases may vary (for example some use "*and not*" for "*not*") while some databases use additional Boolean operators (such as "*next*" or "*near*").

AND Operator

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AND: Combines two (or more) concepts - only retrieving information containing **both** concepts

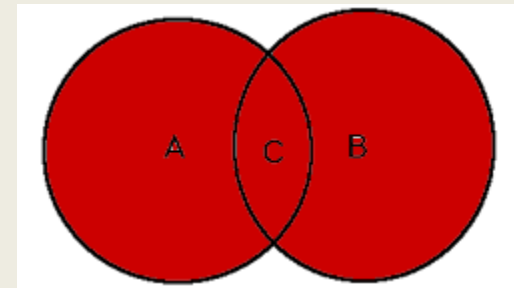
- **For Example:** Find information about heart disease (**A**) **AND** smoking (**B**).
- **Search statement:**
Heart disease AND Smoking
- **Results :** Relevant information found in "C" only - information specifically covering both topics.
- **Example** Find information on losing (A) weight (B)



OR

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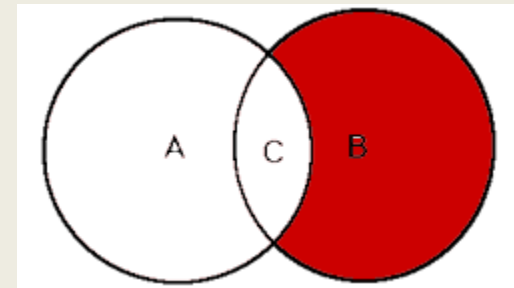
- **OR**: Combines two (or more) concepts retrieving information containing ***either*** concept, whether mentioned separately or together.
- **For Example**: Find information about heart disease (A) **OR** smoking (B)
- **Search Statement**
Heart disease OR Smoking
- **Results** : Relevant information found in "A," "B" and "C" - all information mentioning either topic (whether mentioned separately or together within an article).
- E.g. Fat OR Diet OR Dieting



NOT

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- **NOT**: Used to eliminate key terms from closely associated concepts by limiting retrieved information containing one concept but not the other.
- **For Example**: Find information about heart disease (**B**) that does **NOT** mention smoking (**A**).
- **Search Statement**
Heart disease NOT Smoking
- **Results** Relevant information found in "A" only - representing information on heart disease that does not deal with smoking
- E.g. Weight NOT losing



Truncation

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- Truncation symbols allow you to search for suffix variations of root words.
- Truncation symbol is used to replace letter at end of word/terms
- Specific truncation symbols will **vary widely** from database to database.
- Most databases allow the use of two different truncation types: **Unlimited** / **Limited**
- **Unlimited Truncation**
Allow to search for unlimited suffix variation of the root word
- **For example:** To find variations of the root term **NURSE** place unlimited truncation (in this example the "\$" sign) symbol directly after last common letter
- Results include *nurse*, *nurses*, *nursing* etc.
- E.g. *_reducing* *reduce* *reduction*

NURSE\$

NURSE NURSES NURSING

Truncation

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- **Limited Truncation**
- Allow to search for limited suffix variation of the root word
- Some databases allow use of a truncation symbol and number combination to specify the maximum number of characters that follow the root spelling
- E.g. **NURS\$2**

NURS\$2

NURSE **NURSES**

Wild card

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- Wild symbol is used to replace letter within word/terms
- Wild card symbols allow you to search for spelling variations within the word
- Specific wild card symbols will **vary widely** from database to database. The "#" sign and "?" wild cards used below are an example only;
- To find specific wild card symbols We have check the DATABASE CHART or a database's individual "help" pages
- Many databases allow the use of two different wild card types:
Mandated / Optional

Mandated Wild Cards

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Mandated wild Cards

mandated wild card permit for searching for word where character be present in word

- **For example:** To find the singular and plural variations for **WOMEN/WOMAN** you would substitute the wild card symbol in place of the letter that varies (in this example the "#" sign) Results would be *woman* and *women*
- E.g. Ne#t
- Will search for Neat, Nest, Next but not Net

WOM#N
WOMAN WOMEN

Optional Wild Cards

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Optional Wild Cards

Optional wild card permit for searching for word where character may or may not present

- **For example:** To find the spelling variations for the term **COLOR** the wild card symbol is placed where the spelling variations occur (in this example "?")
- Results would be *color* and *colour*
- *E. g. Labo?r*
- Results would be *labor* and *labour*

COLOR COLO?R COLOUR

Proximity Search

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- A proximity search allows you to specify how close two (or more) words must be to each other in order to register a match. There are three types of proximity searches
- **Word proximity:** word proximity allow to search for terms which fall within specific range
- For example, proximity search to find book , periodical , and theses within a 10 word range
- **QUERY** “Book periodical theses”/10 (ordered)
- **QUERY** “Book periodical theses”@10 (unordered)

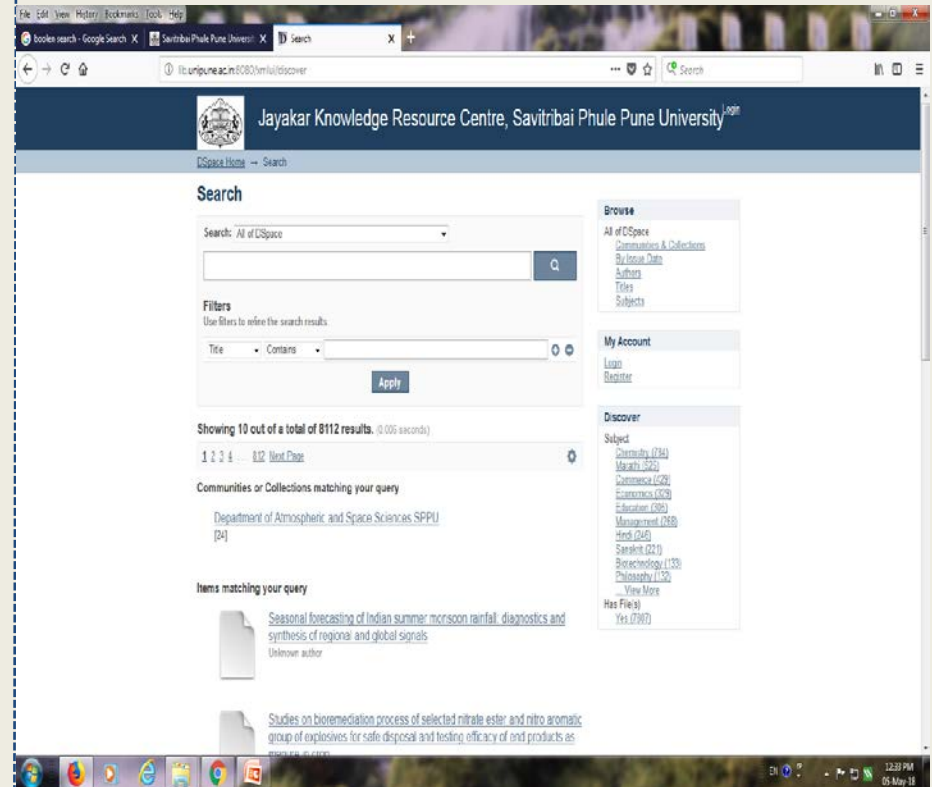
Proximity search

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- **Sentence proximity**
- Sentence proximity search allow you to search for terms which fall within the same sentence
- E.g. " creating a content collection"/S(ordered)
"creating a content collection" (Unordered)
- **Paragraph proximity**
Paragraph proximity search allow you to search for terms which fall within the same paragraph
- e.g. "special proximity codes"/P
"special proximity codes"@P

Field Specific Search

- Field Specific Search: A search can be conducted on all the fields of a database or it may be restricted one or more chosen fields to produce more specific results



Databases

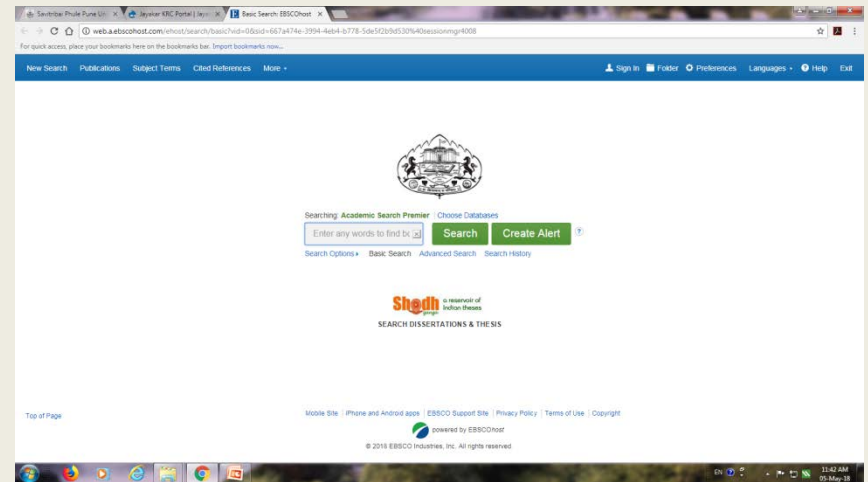


Following slides provides basic information about some prominent databases. Alphabetically by their name. Now we start with Fulltext databases (multidisciplinary and subject specific)

Multidisciplinary databases

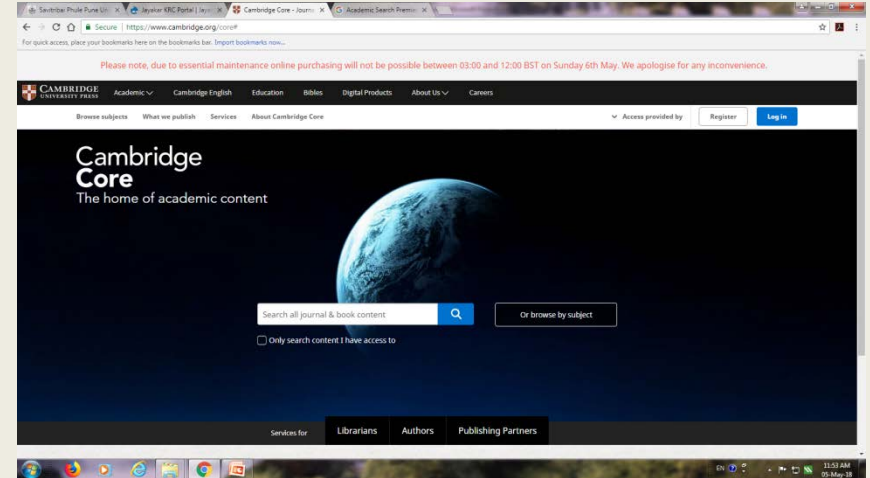


- [Academic Search Premier](#) :
- *Academic Search* is multidisciplinary research database. It provides acclaimed full-text of 4600 journals, magazines and other valuable resources



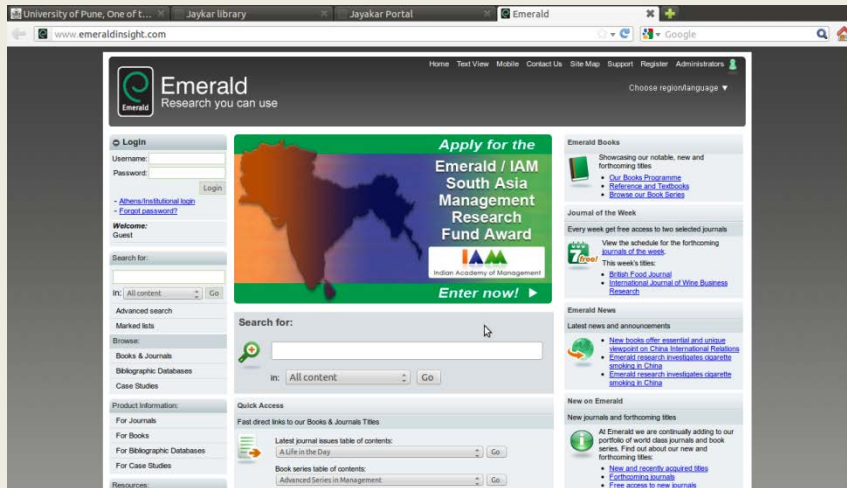
Cambridge University Press

- [Cambridge University Press](https://www.cambridge.org/core) :
- Cambridge University Press in India provides educational and academic materials. It includes full text journal and e books etc.



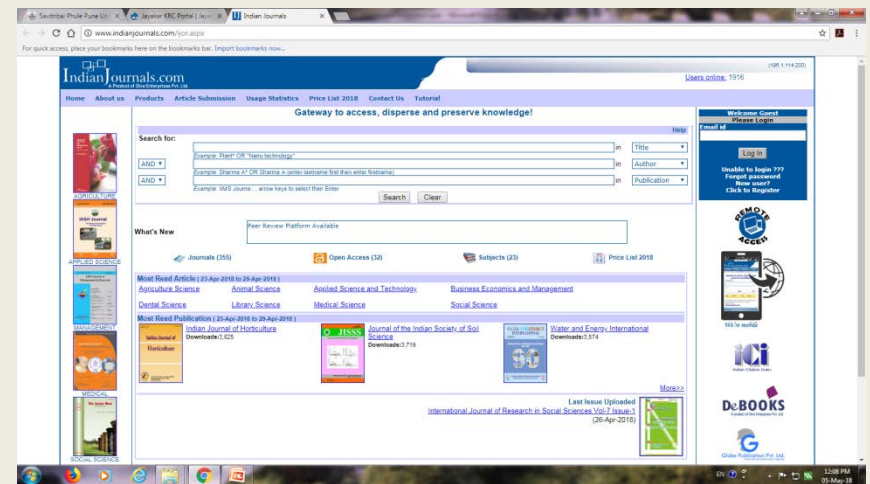
Emerald (LIS Collection)

- Emerald manages a portfolio of nearly 300 journals, more than 2,500 books and over 1,500 teaching cases.



Indian Journals.Com

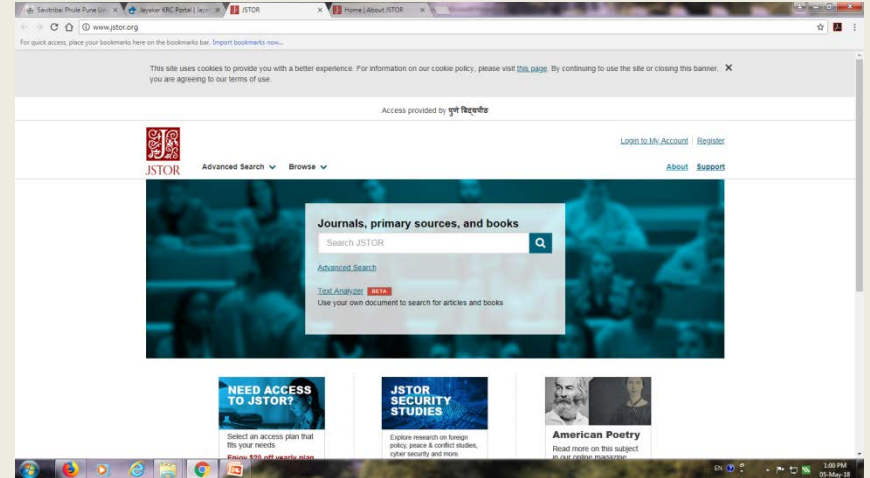
- [Indian Journals.Com](http://www.IndianJournals.Com): is the vast collection of interdisciplinary Indian journals and research publications



J-STOR

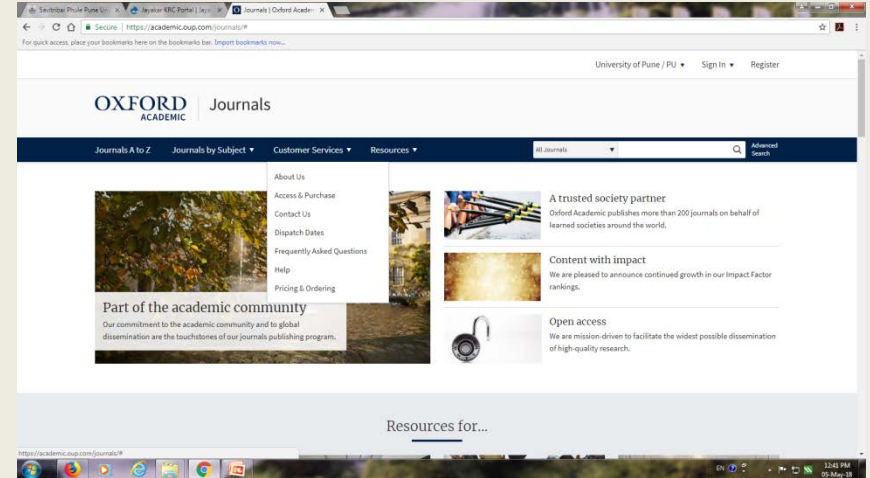


- JSTOR provides access to more than 10 million academic journal articles, books, and primary sources in 75 disciplines.



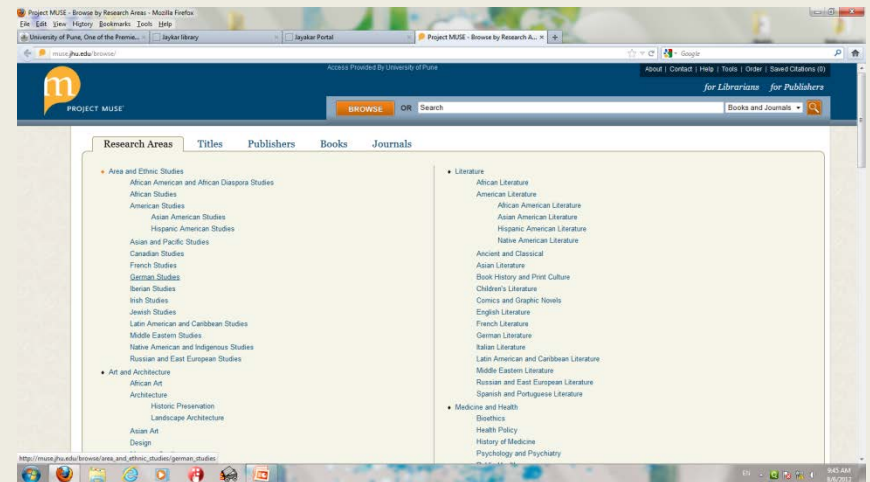
Oxford University Press

- It also multidisciplinary full text database over 300 journals in the humanities, social sciences, law, science, and medicine.



Project Muse

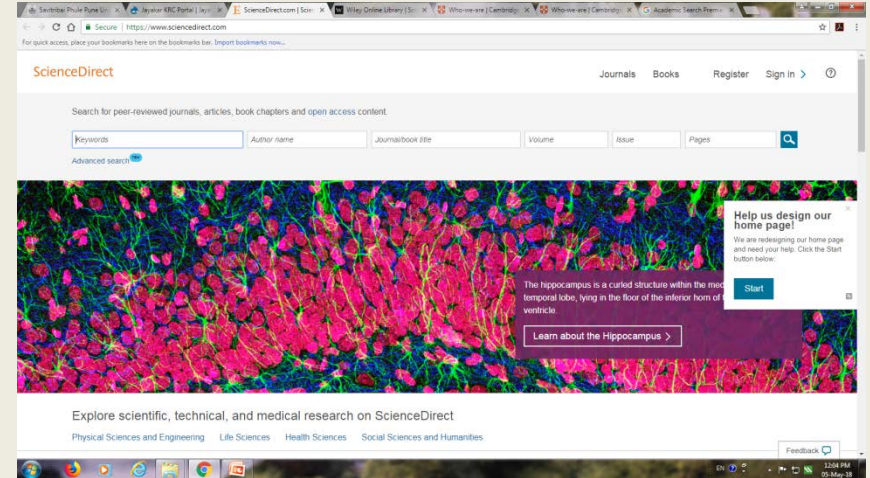
- Project MUSE is a provider of digital humanities and social science content for the scholarly community



Science Direct



It is multidisciplinary
database over
3,800 journals and more
than 37,000 book titles



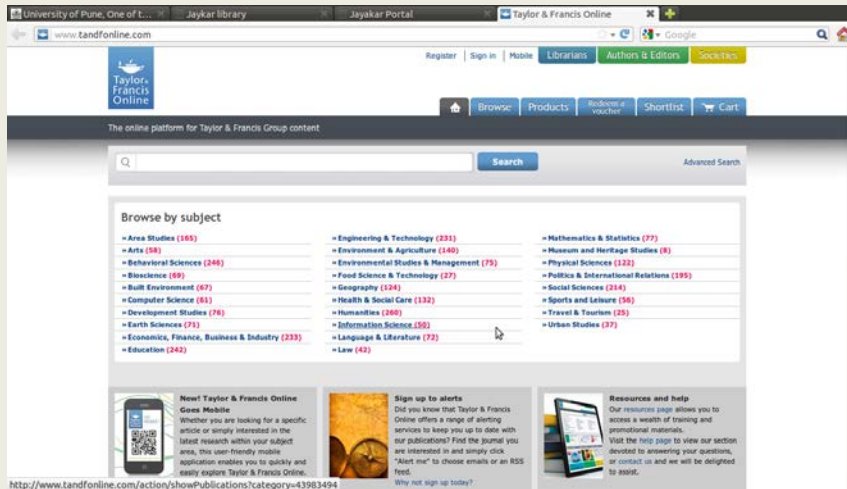
Springer Link

- Providing researchers with access to millions of scientific documents from journals, books, series, protocols and reference works



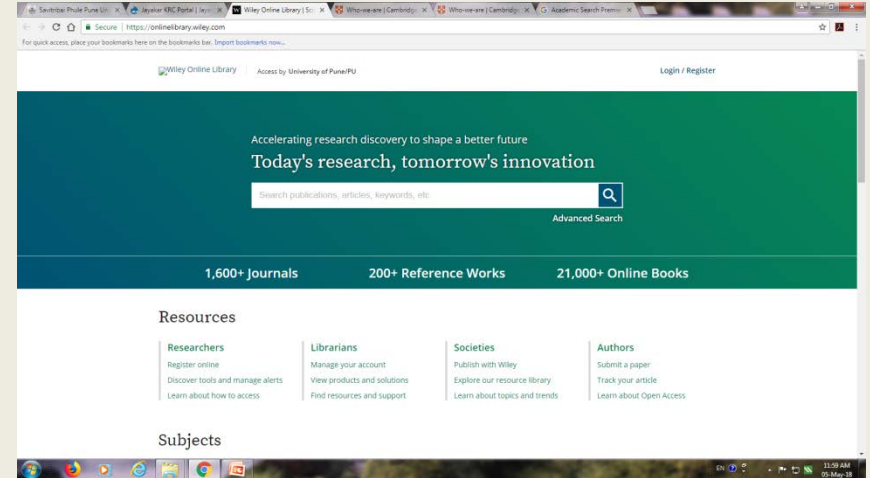
Taylor and Francis

- It is multidisciplinary database covers Humanities, Social Sciences, Behavioural Sciences, Science, Technology and Medicine sectors.



Wiley-Blackwell Publishing

- [Wiley-Blackwell Publishing](https://onlinelibrary.wiley.com): it also multidisciplinary database of 1,600+ Journals 200+ Reference Works and 21,000+ Online Books

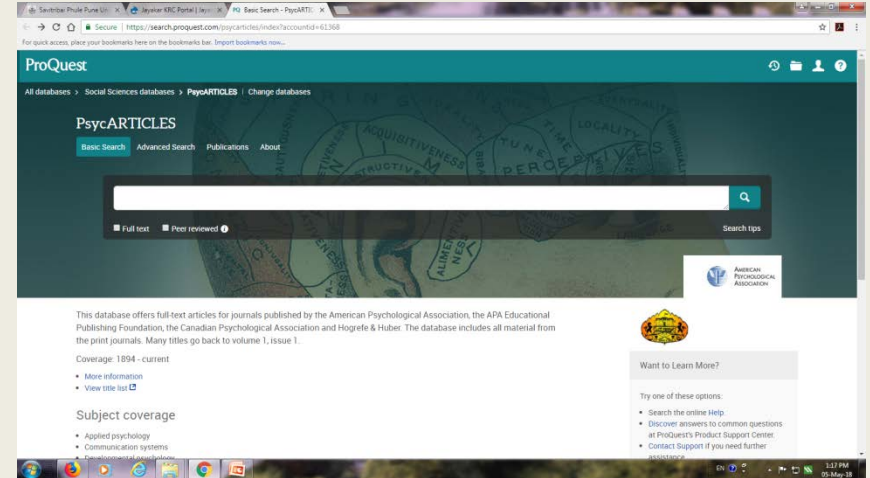




- **Subject /disciplines specific full text databases**

PsycArticle

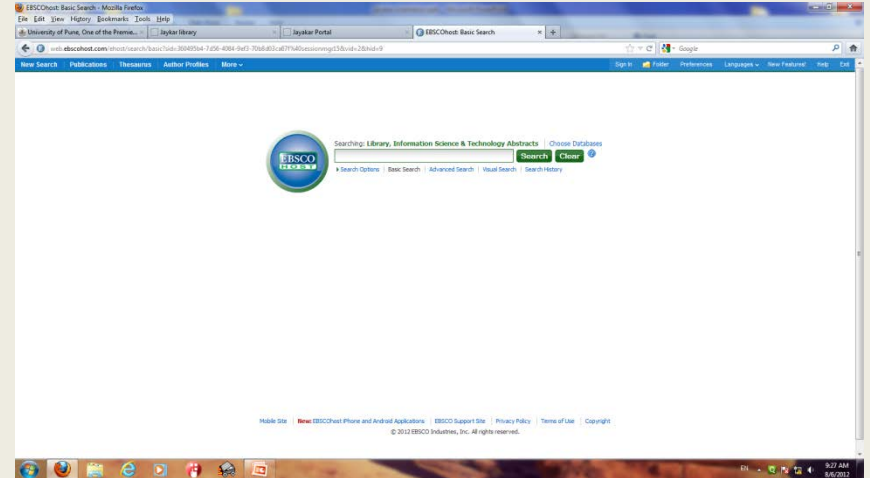
- PsycArticle: This database offers full-text articles from over 117 journals in the field of Psychology published by the American Psychological Association, the APA Educational Publishing Foundation, the Canadian Psychological Association and Hogrefe & Huber



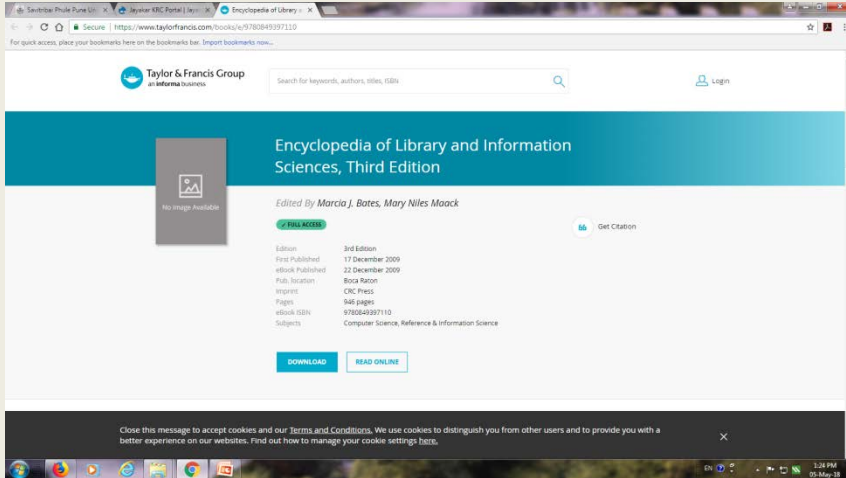
LISTA



- This free research database provides indexing and abstracting for key library and information science journals, books, research reports and more. It is EBSCO's intention to provide access to this resource on a continual basis.



Online Encyclopedia of Library and Information Science

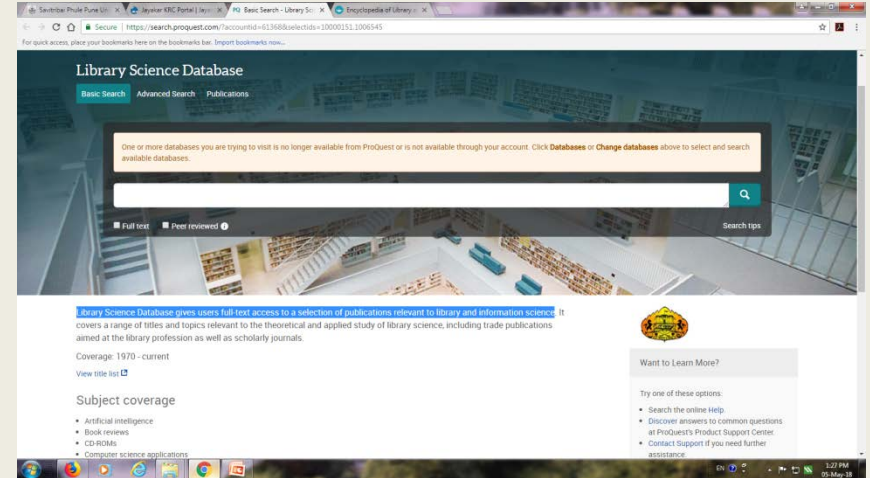


- This third edition of the *Encyclopedia of Library and Information Sciences* reflects the growing convergence among the several disciplines that concern themselves with information and the cultural record

LISA

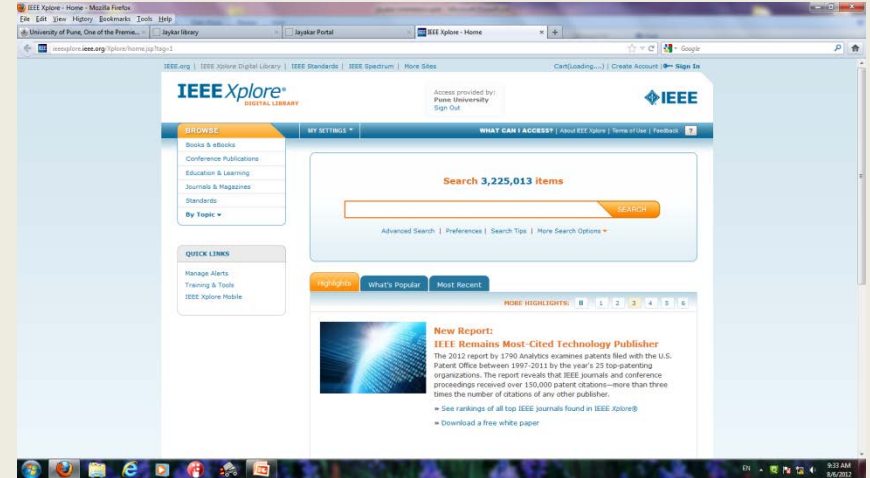


- **Library Science Database** gives users full-text access to a selection of publications relevant to library and information science



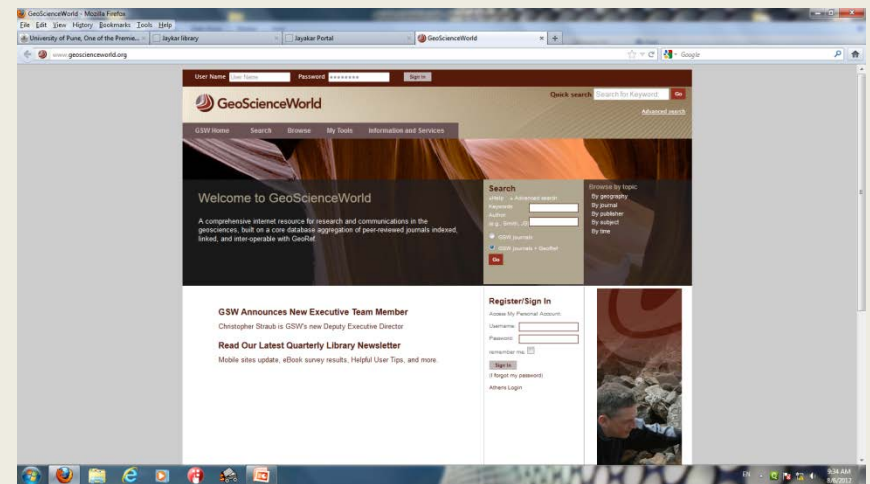
IEEE Xplore digital library

- IEEE Xplore digital library: Full text access to more than 2 million articles in engineering and technology



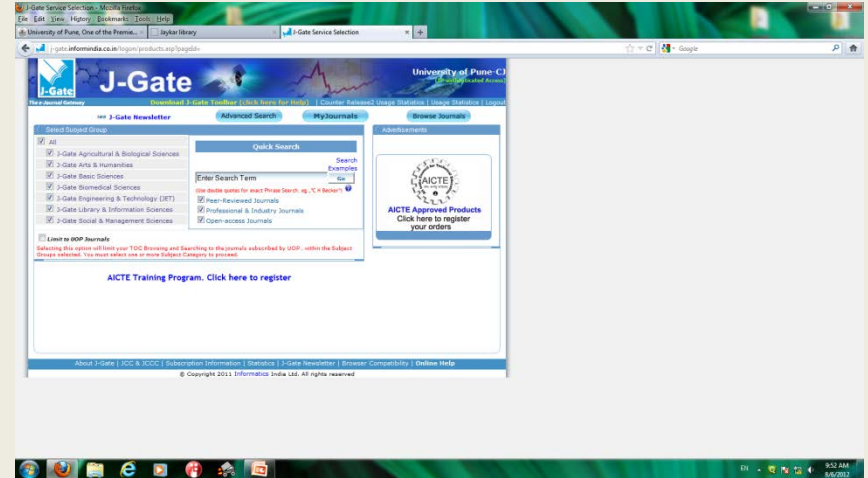
GeoScienceWorld

- GeoScienceWorld: A comprehensive Internet resource for research and communications in the geosciences built on a core database aggregation of peer-reviewed journals



J Gate

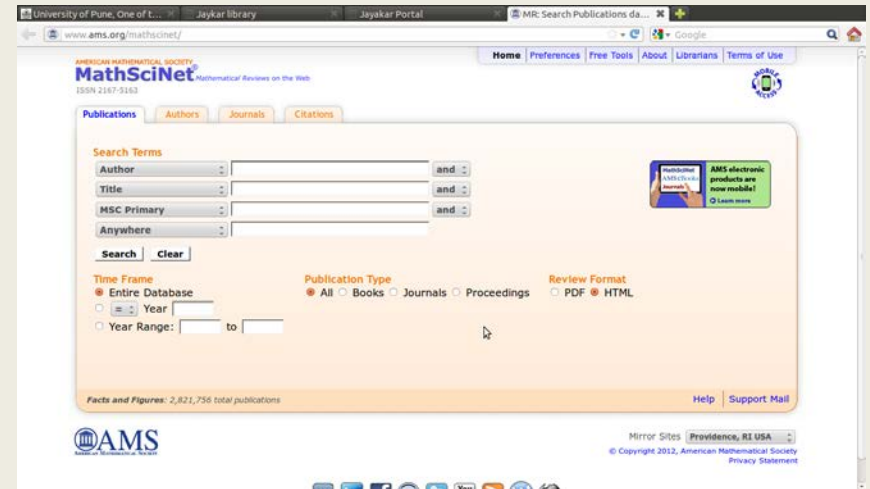
- J Gate: is an electronic gateway to global e-journal literature. provides seamless access to millions of journal articles available online offered by 4969 Publishers. It presently has a massive database of journal literature, indexed from 18097 e-journals with links to full text at publisher sites.



- [Manupatra](#): *Online legal database (India)*
- [Lexisnexis](#): LexisNexis is a leading global provider of content-enabled workflow solutions designed specifically for professionals in the legal, risk management, corporate, government, law enforcement, accounting, and academic markets.
- [CLAOnline](#): Online Library on Corporate/ SEBI and Business Law Since 1950
- [Nature](#): Physics , materials, Nanotechnology

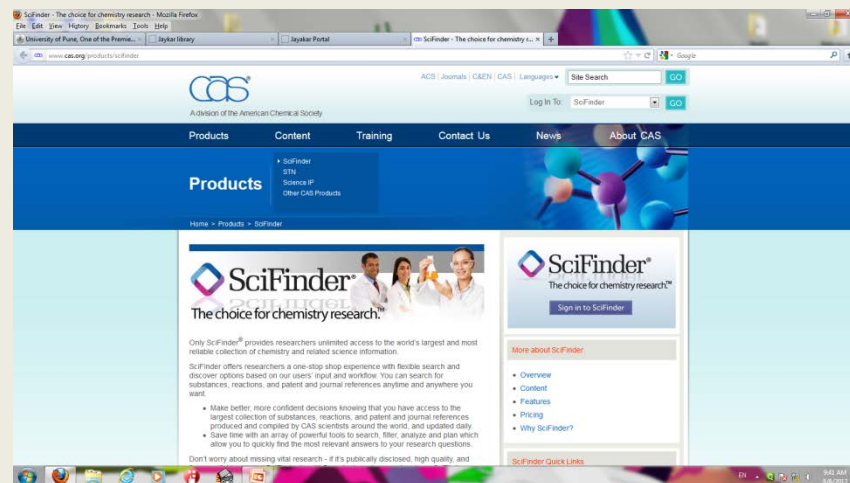
MathSciNet

- MathSciNet: *Searchable database of reviews, abstracts & bibliographic information of the mathematical science literature*
- ISID: *Institute for studies in Industrial development*



SciFinder Scholar

- SciFinder Scholar:
SciFinder is a research discovery tool that allows you to explore the CAS databases containing literature from many scientific disciplines including biomedical sciences, chemistry, engineering, materials science, agricultural science, and more!



Chemistry Physics



- Royal society of chemistry(29 journals + 6 Databases)
- American Chemical Society (37 Journals)
- American Institute of Physics (18 Journals)
- American Physical Society (10 Journals)
- Institute of Physics (46 Journals)
- -----other-----
- Nature
- Economic & Political weekly



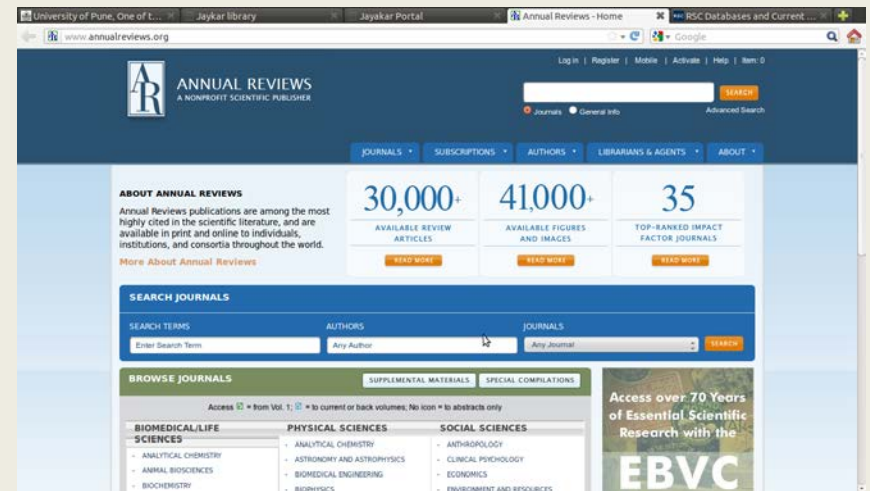
Society for Industrial and Applied Mathematics (14
Journals)

Project Euclid : Mathematics and Statistics

Portland Press

Annual Reviews

- Annual Reviews publications are among the most highly cited in the scientific literature, and are available in print and online to individuals, institutions, and consortia throughout the world.



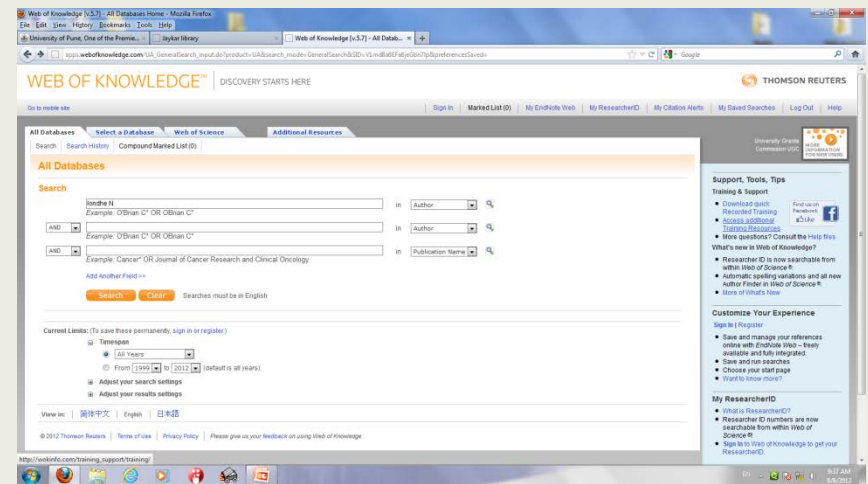


- # Citation databases

Web of science



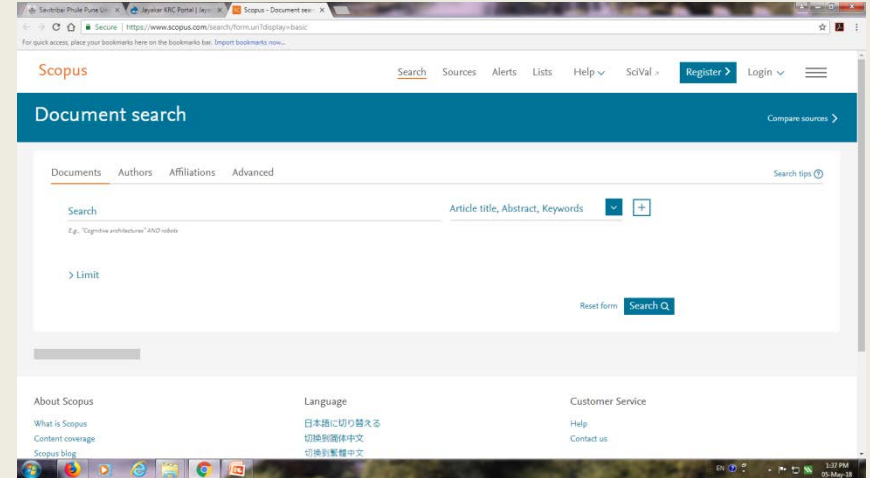
- Web of science: Access to multidisciplinary information from approximately 8,700 of the most prestigious, high impact research journals in the world.



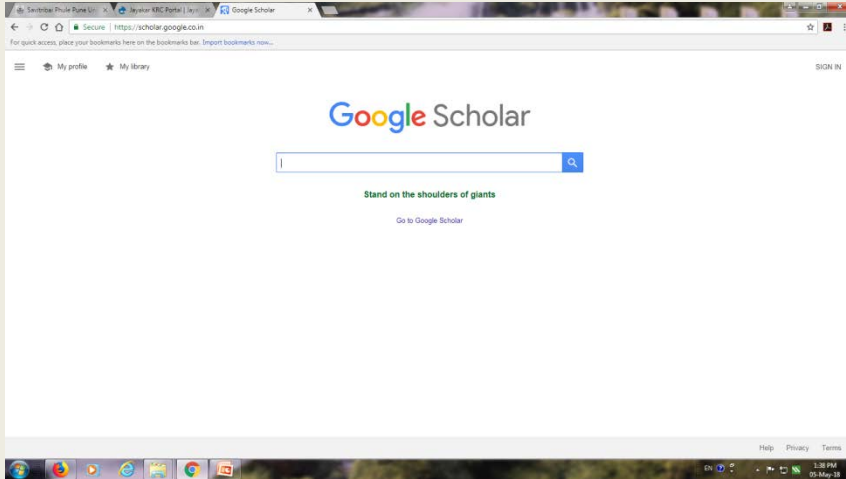
Scopus



- Scopus is the abstract and citation database of peer-reviewed literature: scientific journals, books and conference proceedings.



Google scholar



- Google Scholar provides a simple way to broadly search for scholarly literature. From one place, you can search across many disciplines and sources: articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites. Google Scholar helps you find relevant work across the world of scholarly research.

References



- <https://www.hanken.fi/en/about-hanken/organisation/library/service-researchers/bibliometrics/citation-databases>
- <https://www.merriam-webster.com/dictionary/database>
- <https://scholar.google.co.in/intl/en/scholar/about.html>