



Information Skills in Information Technologies Fall – 2020

1. Information search, systems and strategy

**BRGF Library
ruth.inigo@upc.edu**

Contents:

- 1)Information skills**
- 2)Information search: from simple to complex**
- 3)Internet resources: Google Scholar, Semantic Scholar**



Why is important to develop informational Skills?

More than 48 billion of URL of URLs in Google's index

More than 4,5 milion of articles (in English) on Wikipedia

Irregular quality of contents

Information is disperse in diverse sources

We tend to search information without having a deep knowledge of the sources

We tend not to evaluate the results obtained in our search





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**Which kind of sources we have
to find information?**

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What is a library catalogue ?

It is a database useful to know

- **the documents held by a library or group of libraries** (books, journals, DVD, etc.)
- where these materials are **located**
- which is their **availability** to consult or loan them
- provides a basic **description** of the document

Usually we **don't find** in a catalogue:

- Journal articles, book chapters, conference papers

For instance , you can check the possibilities of a regular library catalog like the UPC's one

https://cataleg.upc.edu/*eng

Type the keyword(s) in the box below then press Enter or click the Search button.

[Search at UPC](#) [Search at CCUC](#)

Search tips:

- Type the keyword(s) you want to find
- Use quotation marks to find exact phrases
- You may use the boolean operators AND, OR and AND NOT between words

Advanced search:

- To refine your search (e.g. by which library owns the document, by date, by language), use the [Advanced Search](#)



Alan F. Chalmers

¿Qué es esa cosa llamada ciencia?

18ª ed. Madrid : Siglo XXI de España Editores, S.A
ISBN 84-323-0426-3

Col·lecció Tecnoscopi



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Catalogue

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Search tips:

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- Use quotation marks to find exact phrases
- You may use the boolean operators AND, OR and AND NOT between words

Other searches:

- [Advanced Search](#)

Keyword

- Keyword
- Title
- Author
- Subjects
- ISBN/ISSN
- Call Number
- Series

New York [etc.] : Springer
ISBN 0387908129.

DOCUM

Searching by...

Title: Search the title of the work – avoiding the article - (The Third man → Third man)

Subject: In Catalan.

Author: Surname first

Keyword: the system retrieves the written words from any field in the record

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Set Search Limits

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Catalogue

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Advanced Keyword Search

Please fill in the form, select limits, and click Search (or choose a [Simple Keyword Search](#)). Reset form

Scope: View Entire Collection

Any Field		And
Any Field		And
Any Field		And
Any Field		

Search at UPC

Limited to:

☐ Limit search to titles with available items

Library: ANY
Arquitectura BCN
Arquitectura Vallès
Baix Llobregat
CDDECMÀ

Material type: ANY
Printed Book
E-book
Printed Journal
E-journal

Language: ANY
German
English
Arabic
Basque

Year: After and Before

Publisher:

Sorted by:

Search and Sort: sorted by relevance



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The union of a local, simple systems makes up a bigger system

for instance...

Catalan Universities Consortium Catalog



Català | Castellà

Keyword

TitleAuthorSubjectISBN/ISSN

Sorted By: Entire catalog

Submit

PUC

Préstec de llibres entre les biblioteques del CBUC

Other searches:

▶ Advanced Keyword search

▶ Old books (15th-19th century)

▶ CÀNTIC (Authorities)

▶ Special collections

CCUC information

▶ What is ccuc

▶ Integrated libraries

▶ CCUC cataloging standards

▶ Further information

▶ Consortial borrowing

Other CBUC resources:

▶ BuscaRE

▶ MDC

▶ MDX

▶ RACO

▶ RECERCAT

▶ Table of contents

▶ TDX

▶ What is PUC

https://ccuc.csuc.cat/search*eng

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Not so local, not so simple: WorldCat

<http://www.worldcat.org>



Find items in libraries near you

2 billion items available here through a library

Everything Books DVDs CDs Articles

[Advanced search](#) | [Find a Library](#)

WorldCat connects you to the collections and services of more than 10,000 libraries worldwide [Learn more >>](#)

Sign in to create lists, bibliographies and reviews of library materials

User Name:

Password:

☐ Remember me on this computer.

[Forgot your password?](#) | [Create a free account](#)

NOTICE: By accessing and using WorldCat services, you hereby consent to your personal data, and any other data you provide, being transmitted to and stored in the United States of America.

[Sign up for e-mail updates](#)

Very simple and local information systems, working together may become big and powerful, if their data are structured and share the same standards of description.

One thing you can do with WorldCat is to find out which is nearest library from your location that holds the Ph D Thesis of Angela Merkel

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Databases:

Complex search = Relevancy of results depends on you

Advanced search Compare sources >

Documents Authors Affiliations **Advanced** [Search tips ?](#)

Enter query string

Outline query Add Author name / Affiliation **Search Q**

ALL("Cognitive architectures") AND AUTHOR-NAME(smith)

TITLE-ABS-KEY(*somatic complaint wom?n) AND PUBYEAR AFT 1993

SRCTITLE(*field ornith*) AND VOLUME(75) AND ISSUE(1) AND PAGES(53-66)

Operators

AND +
OR +
AND NOT +
PRE/ +
W/ +

Field codes ?

Textual Content ▾
Affiliations ▾
Authors ▾
Biological Entities ▾
Chemical Entities ▾
Conferences ▾
Document ▾
Editors ▾
Funding ▾
Keywords ▾
Publication ▾
References ▾
Subject Areas ▾



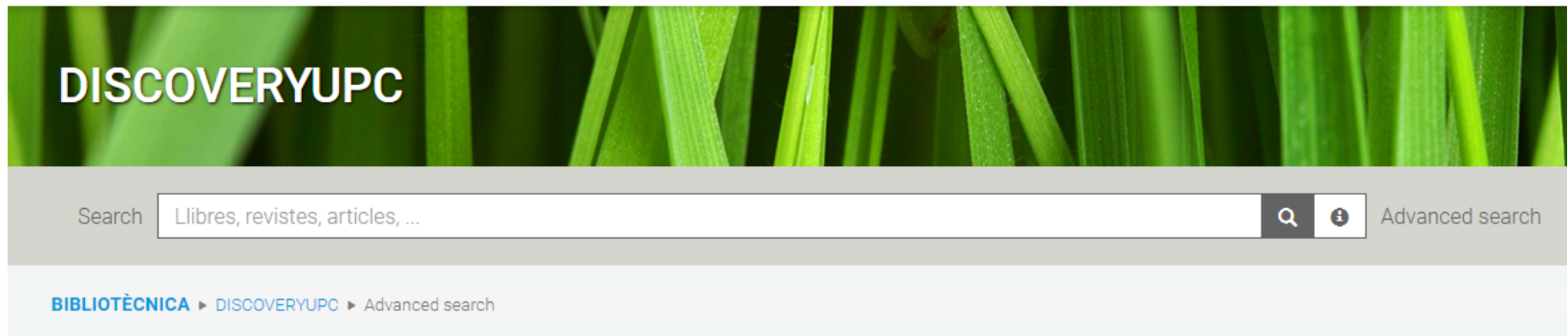
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Metasearch: catalog + databases + other e-resources

Metasearchers like Discovery in UPC allow to
search in different resources available

<https://discovery.upc.edu/iii/encore/?lang=eng>

Bibliotècnica
UPC digital library



Do you want to check what Discovery retrieves
about ...Coronavirius?

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Search engines: an algorithm is doing the work

[USPTO PATENT FULL-TEXT AND IMAGE DATABASE](#)

[Home](#) [Quick](#) [Advanced](#) [Pat Num](#) [Help](#)

[Bottom](#)

[View Cart](#) [Add to Cart](#)

[Images](#)

(1 of 1)

United States Patent
Page

6,285,999
September 4, 2001

**Please see images for: (Certificate of Correction) **

Method for node ranking in a linked database

Abstract

A method assigns importance ranks to nodes in a linked database, such as any database of documents containing citations, the world wide web or any other hypermedia database. The rank assigned to a document is calculated from the ranks of documents citing it. In addition, the rank of a document is calculated from a constant representing the probability that a browser through the database will randomly jump to the document. The method is particularly useful in enhancing the performance of search engine results for hypermedia databases, such as the world wide web, whose documents have a large variation in quality.

Inventors: Page; Lawrence (Stanford, CA)
Assignee: The Board of Trustees of the Leland Stanford Junior University (Stanford, CA)
Family ID: 26673538
Appl. No.: 09/004,827
Filed: January 9, 1998

Current U.S. Class: 1/1; 707/999.005; 707/999.007; 707/E17.097; 707/E17.108; 715/206; 715/207; 715/230; 715/256
Current CPC Class: G06F 17/30728 (20130101); G06F 17/30864 (20130101); Y10S 707/99935 (20130101); Y10S 707/99937 (20130101)
Current International Class: G06F 17/30 (20060101); G06F 017/30 ()
Field of Search: ;707/100,5,7,513,1-3,10,104,501 ;345/440 ;382/226,229,230,231

References Cited [\[Referenced By\]](#)

U.S. Patent Documents





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What search engines do with information?

Crawling

Indexing

Analysis

Storage

Searching

Algorithms

Retrieving

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Internet Resources

Biases

Commercial


Stereotypes based in users'
past views

Political

Internet Resources: Google Scholar

Google Scholar → <http://scholar.google.com>

 My Citations  Metrics  Alerts  Settings

☒ Articles (☒ include patents) ☐ Legal documents

Stand on the shoulders of giants

Scholar Updates: Recommended articles for you

Internet Resources: Google Scholar

Google Scholar → <http://scholar.google.es>



The screenshot shows the Google Scholar search interface. On the left, there is a sidebar with the following options:

- Scholar** (highlighted with a red box)
- Articles** (highlighted with a red box)
- Legal documents
- Any time** (highlighted with a red box)
 - Since 2012
 - Since 2011
 - Since 2008
 - Custom range...
- Sort by relevance** (highlighted with a red box)
 - Sort by date
- ☒ include patents
- ☒ include citations
- ☐ Create alert

The main search area has a search bar with the text "upc enginyeria". Below the search bar, there are several filters and options:

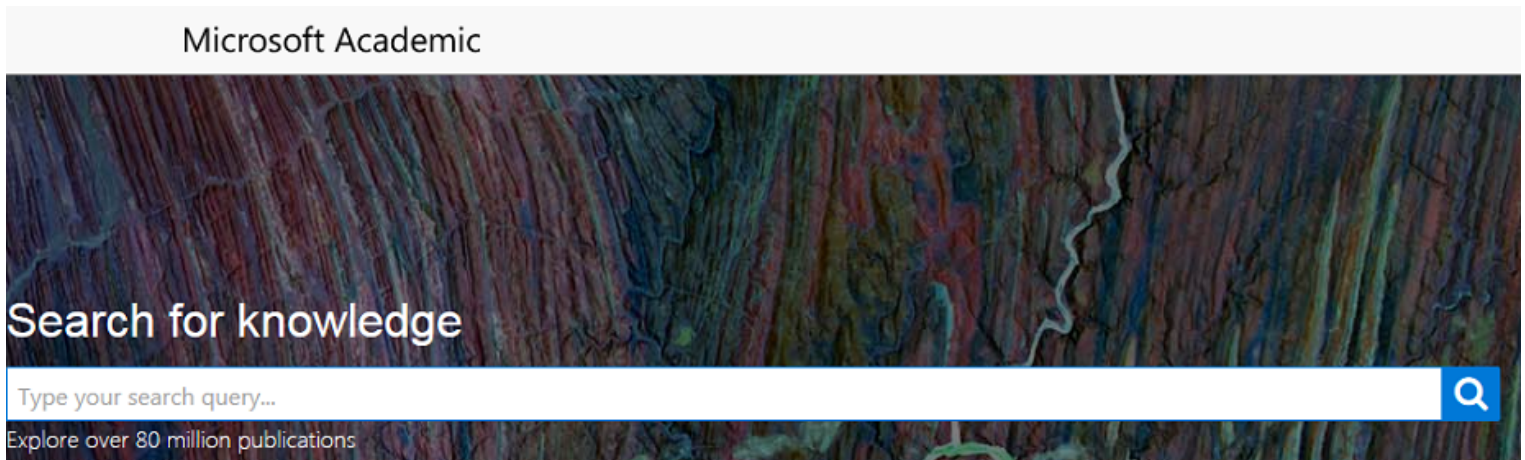
- Find articles** (highlighted with a red box)
 - with **all** of the words
 - with the **exact phrase**
 - with **at least one** of the words
 - without** the words
 - where my words occur
- Return articles **authored by**
- Return articles **published in**
- Return articles **dated** between

On the right side of the search bar, there is a blue search button with a magnifying glass icon. Below the search bar, there is a "My Citations" button. The search results show a list of articles, with the first article titled "Database of 'in vivo' measurements for quantitative microwave imaging and reconstruction algorithms available" (highlighted with a red box). The article is by JJ Mallorquí, N Joachimowicz, JC Bolomey... - 2012 - recercat.net. The subject is: Àrees temàtiques de la UPC::Enginyeria electrònica i telecomunicacions::Radiocomunicació i exploració electromagnètica::Teledetecció Biomedical engineering Databases Electromagnetic waves Image reconstruction Algorithms Database system ...

Internet Resources: Microsoft Academic

Microsoft Academic Search→

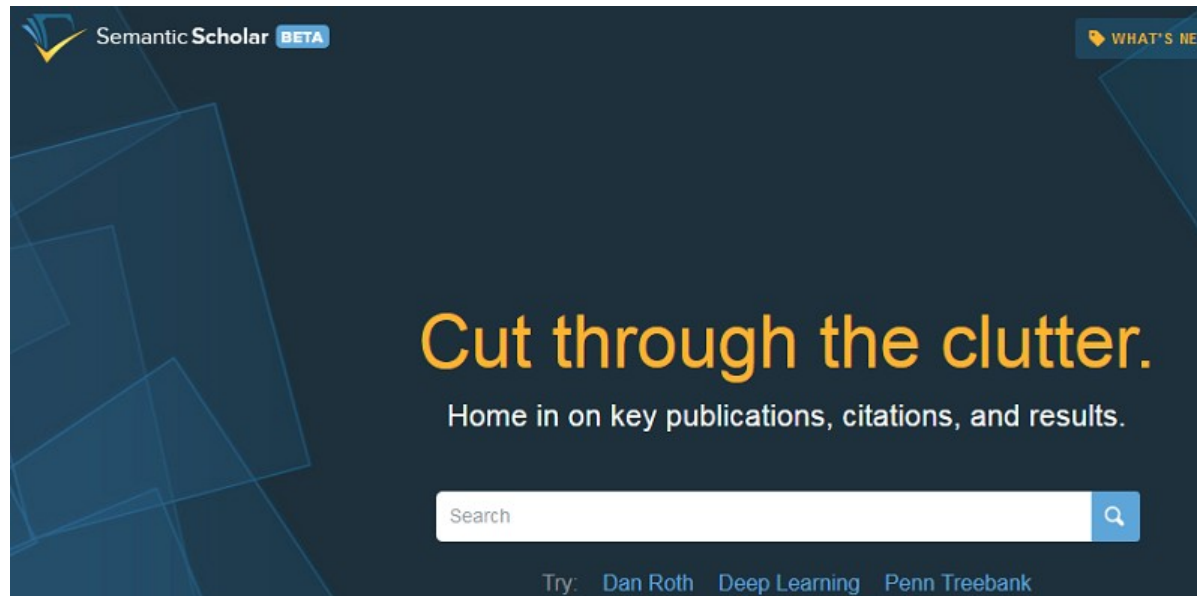
<https://academic.microsoft.com/>



Internet Resources: Semantic Scholar

Semantic Scholar→

<https://www.semanticscholar.org/>









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Internet Resources: Baidu Scholar

[网页](#) [新闻](#) [贴吧](#) [知道](#) [音乐](#) [图片](#) [视频](#) [地图](#) [文库](#) | [百度首页](#) [登录](#) [注册](#) [设置](#)



百度一下

 cnki 中国知网 www.cnki.net	 万方数据 WANFANG DATA	 VIP 维普资讯	 Springer Link	 ScienceDirect	 Wiley Online Library
 WEB OF SCIENCE™	 Engineering Village				

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Search Strategy

Let's see some tips to build your own algorithm of search

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Search Strategy

1a. Define your search topic in a sentence

“Applying artificial intelligence to
computer games”



Search Strategy

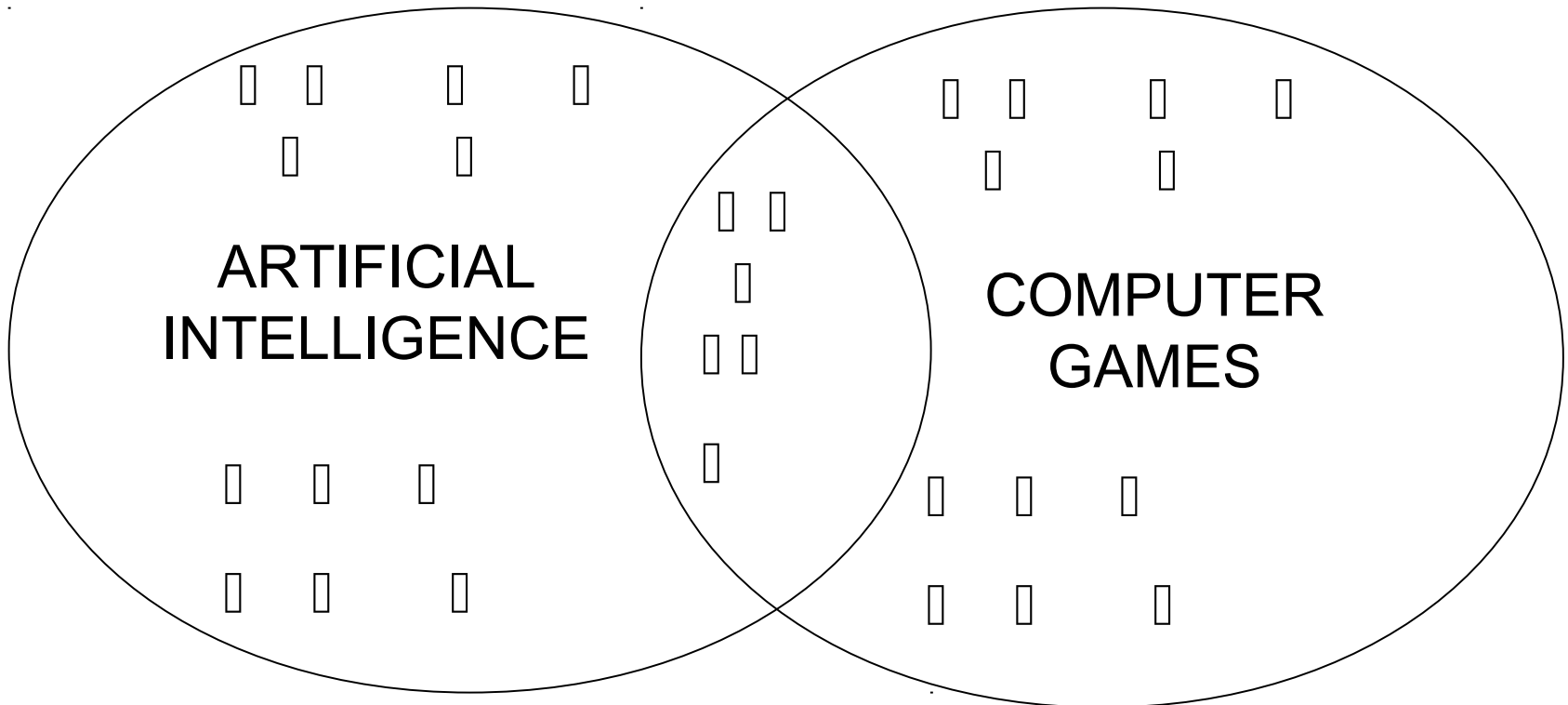
2a. Select information sources

- Library catalogs: *UPC, CCUC...*
- Bibliographic databases: Inspec, WoS, etc
- Internet: *Scholar Google, etc.*



Search Strategy

3a. Identify major concepts and its Boolean relationship





Search Strategy

4a. Identify keywords and synonyms

<i>Game console</i> <i>Game consoles</i>	<i>Videogame</i> <i>Videogames</i>	<i>Computer game</i> <i>Computer games</i>	<i>Artificial intelligence</i> <i>AI</i>
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Search Strategy

5a. Study the query language of the resources

**-Operators, Search fields, Thesauri ,
etc**



Search Strategy

6a. Write a search statement according to it

((computer* AND game*) OR videogame* OR console*) AND (“artificial intelligence” OR ai)

Search Strategy

- **Step 2: Execute the search**
- **Step 3: Evaluate your results**
- **Step 4: Check the terminology and restart if needed**



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Evaluation of information

Once we have got the
results, we'd better check a
several things...

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Search Strategy

Evaluate your search results

- Too many articles? (Noise)

- Use more specific terms or phrases to narrow the search to exactly what you need
- Limit your search to restrict retrieval to entries that meet specific requirements

-Too few articles? (Silence)

- Check the spelling
- Use some more general search terms or
- Add more synonyms (with OR). Use the thesaurus if possible or look in other interesting records and search using their subjects.

Evaluation of information

- URL domain: **.com, .edu, .info, etc.?**
- Website creation data (**© copyright**), an latest update?
- Who???: **personal website?? Institutional website?**
- Information about author? (**CV, activities, other publications**)

Evaluation of information

- **Authorship intention (“about us”)?: inform, criticize, sell...?**
- **The data offered are easily verifiable?**
- **Data offered are from an acknowledged source?**
- **Are there some links to interesting or related websites?**
- **The website is cited or linked from other websites?**



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1. Information search, systems and strategy

Questions?

**you can use Atenea forum
or contact us by e-mail**

NEXT → 2. Ethical use of information

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