



Managing Research Literature

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Overview

- Role of literature in Computer Science
- Finding the right literature
- Tools to manage literature
- Citations: styles, tools, and techniques

Role of Literature in CS

- Worst-case scenario You write a paper about your recent research results and submit the paper to a conference/workshopthe reviewers tell you that these results have already been published in journal X
- Second worst-case scenario
 Your findings are indeed new
 you missed most of the <u>related work</u> in your paper

Role of Literature In CS (2)

Problem

There are too many conferences, workshops, symposia one has to keep track of (at least in most areas)
Same oftentimes holds for journals, newsletters, bulletins etc.

There is a huge amount of CS literature on the Web, including theses, online books, technical reports...

Solution

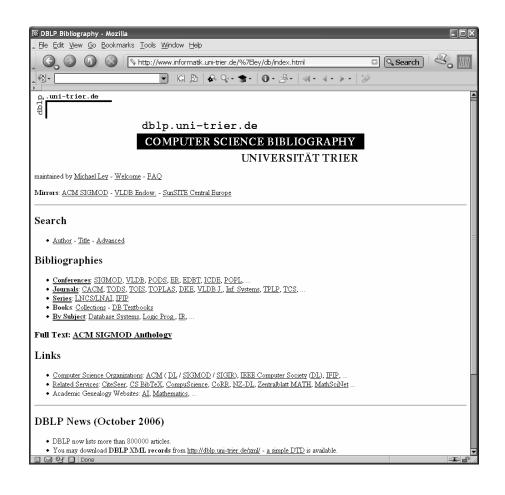
Make extensive use of existing literature search tools (assuming that you know what your research focus is...)

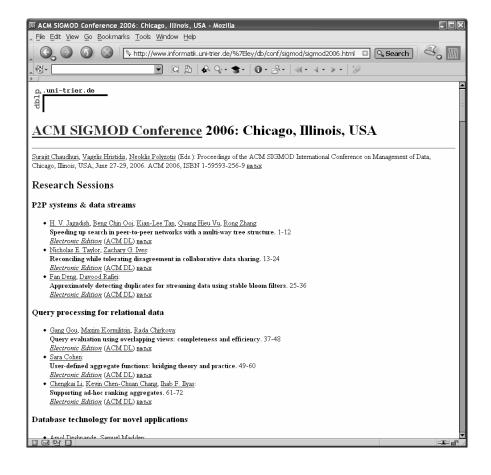
Information Sources

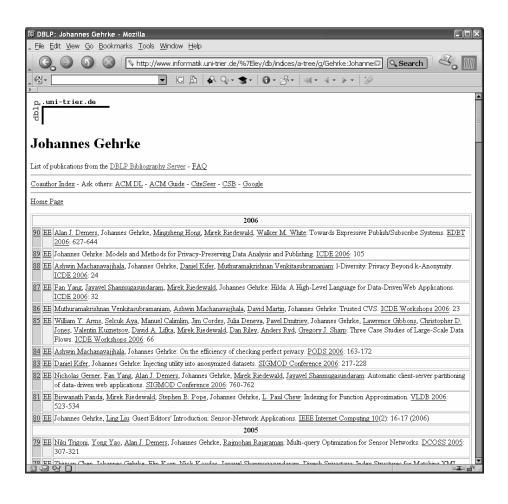
- Computer Science Bibliography Server (DBLP)
- ACM Portal
- IEEE Xplore
- Google Scholar
- Science Direct
- CiteSeer
- Networked Computer Science Technical Reference Library (NCSTRL)
- Collection of Computer Science Bibliographies

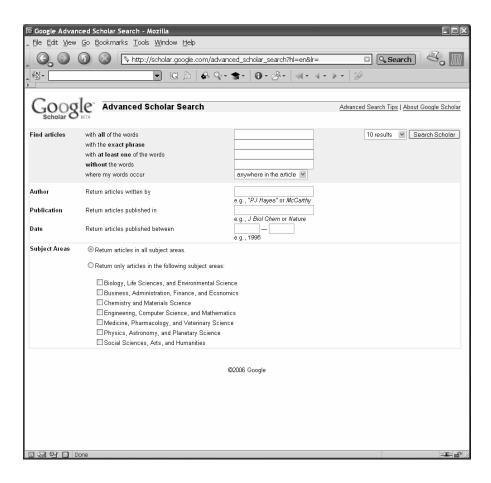
DBLP (Databases and Logic Programming) (Digital Bibliography & Library Project)

- Managed at the University of Trier, Germany
- Official site: http://dblp.uni-trier.de/
- Mirror sites: New York Darmstadt Los Angeles ACM
- Services
 - Lists more than 800,000 articles from almost all areas in CS
 - Includes several hundred conferences, workshops, symposia etc.
 - Extensive list of journals (ACM, IEEE, Elsevier, Kluwer, Springer...)
 - Includes links to online paper versions (Springer, ACM, IEEE,...)
 - Links to author homepages (if available)
 - Author and (simple) keyword search
 - Co-author list
 - BibTeX records for each paper







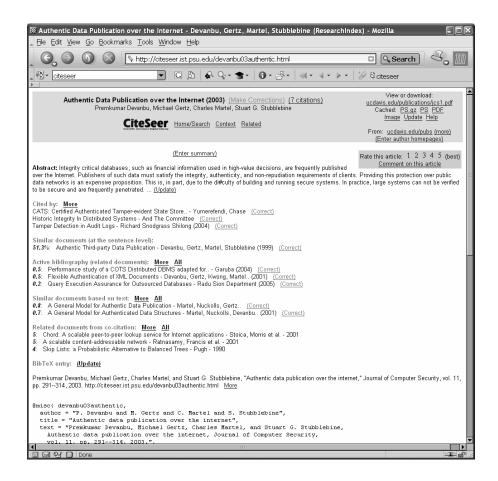




CiteSeer

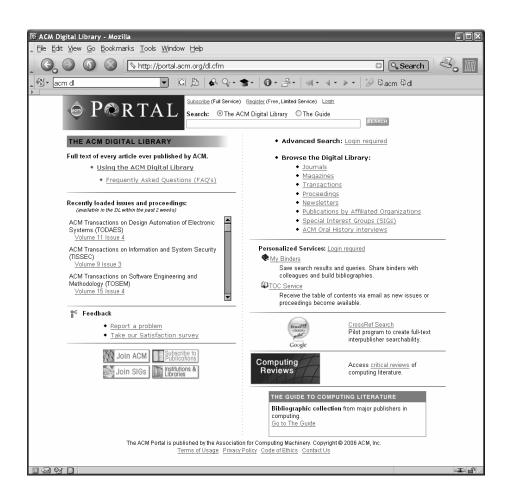
"CiteSeer is a scientific literature digital library that aims to improve the dissemination and feedback of scientific literature, and to provide improvements in functionality, usability, availability, cost, comprehensiveness, efficiency, and timeliness." [from CiteSeer Web site]

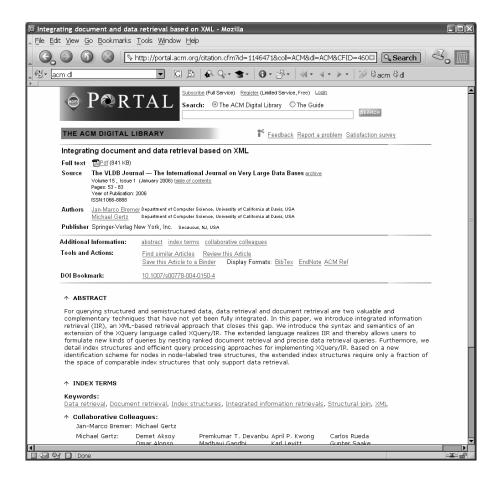
- http://citeseer.ist.psu.edu/
- Services
 - Full-text indexing of online technical papers
 - Keyword search; ranking (by citations, hubs, usage, date; default: expected citations)
 - Related & similar documents
 - Statistics: impact ratings, publication delay, most cited authors.,,,



ACM Digital Library

- Bibliographic collection from major publishers in computing with over 750,000 entries.
- http://portal.acm.org/
- Accessible through UC Davis (or proxy)
- Services
 - Keyword search
 - Full-text (if available); similar articles, reference in BibTeX format, collaborative colleagues, index terms





IEEE Xplore

"IEEE *Xplore* provides full-text access to IEEE transactions, journals, magazines and conference proceedings published since 1988 plus selected content back to 1950, and all current IEEE Standards."

- http://ieeexplore.ieee.org/
- Accessible through UC Davis (and proxy)
- Services
 - Search and access complete abstract records and full-text documents
 - Search by author and keyword(s)



Other Resources

- UC Davis Library Electronic Journals http://www.lib.ucdavis.edu/ul/research/ejournals/index.php Services: keyword(s) anywhere, title, author, subject words; dissertation catalog...
- ScienceDirect
 http://www.sciencedirect.com/
 (most UC online journals reside at that site)
- The WWW Virtual Library (http://vlib.org/); Computer Science Bibliography (http://library/http://library/http://vlib.org/);

Tools

- Managing the possibly huge amount of literature you collect (and read) for your research is crucial; but, how to avoid tall stacks of papers?
- Assumption: you use LaTeX in combination with BibTeX @article{767150,

```
author = {Can T\&\#252;rker and Michael Gertz},
title = {Semantic integrity support in SQL:1999 and commercial (object-)relational database management systems},
journal = {The VLDB Journal},
volume = {10}, number = {4}, year = {2001}, issn = {1066-8888}, pages = {241-269}, publisher = {Springer-Verlag New York, Inc.}, }
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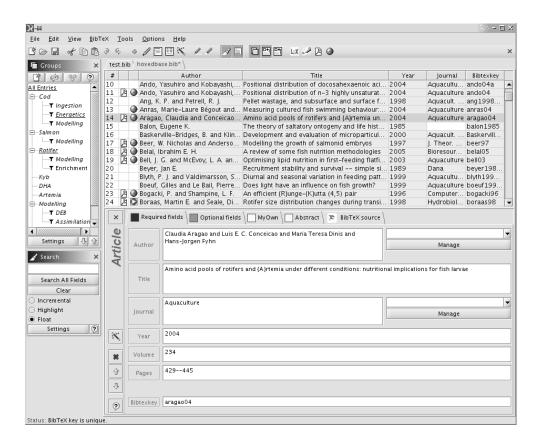
 Other BibTeX related tools depend on the editor you use (e.g., refbib in emacs)

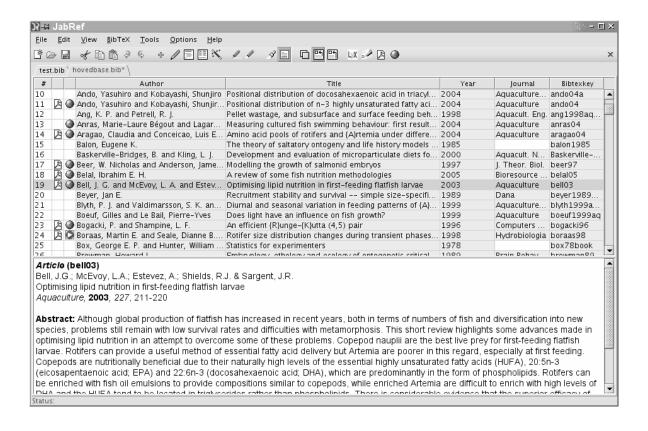
JabRef

"JabRef is a GUI for managing BibTeX databases. Bibtex is a standard LaTeX bibliography reference format commonly used in academia. Jab Ref works on all platforms and requires Java 1.4.2. JabRef builds on and extends the functionalities of BibKeeper and JBibtexManager."

Features: Searching, Sorting and Editing, Automatic Key generation, Import bibliography formats: BibTex, Endnote (text),ISI Web of Science, Medline/Pubmed (xml),Scifinder format,OVID,INSPEC and RIS; Export: html and docbook, insert citations into LyX

http://jabref.sourceforge.net (Version 2.1, August 2006)





How to "Organize your Research Area"

Create and maintain

- a list of the major conferences, workshops, symposia in that area;
- a list of all journals relevant to your area
- a list of people working in your area; see what their students are working on; check for technical reports and Ph.D. theses
- Make use of mailing lists
- Constantly browse these repositories; you don't want to miss an important "event"
- Try to categorize the literature you collect (e.g., build several .bib files); this is easy to do in jabref

How to Reference Literature

[GerKwoMartDev2004ab] describe an approach.... the definition in [ABC1999] shows that...

[5] is similar to [6], except that they do not show the property given in [7].

There have been several solutions to this optimization problem [32,12,4, 55,3,17,97,1,56,13,15].

There are numerous styles and guidelines that describe how to correctly reference literature. There are several different referencing systems.

- How to make an in-text reference?
- How to organize references and what style to use?

How to Reference Literature (2)

In-text references

- Jones (1998) compared student performance ...; In a recent study of student performance (Jones, 1998), ...
- Use author names, e.g., "Gertz et al. [12] showed that..." instead of "[12] showed that..."
- Have "short" references, e.g., based on the first letter of last name of the first three authors ([ABC2002], [GL2001]), or on first three letters in case of a single author ([Ger2002])

How to Reference Literature (3)

References

- Keep references sorted (by author name(s))
- Avoid conference/workshop acronyms, e.g.,
 Gertz, M. (2002): Fuzzy spatial data. In UKDR02.
- For URLs, include date you checked URL the last time
- There are several style-guide, e.g., the American Psychological Association (APA) Format.
- Many publishers (IEEE, ACM, Springer...) provide style files and examples

How to Reference Literature (4)

References

- How to use references und use citations in research writing http://www.languages.ait.ac.th/EL21REFP.HTM
- How to use references within the text of your work
 http://www.bim.napier.ac.uk/~hazel/gen_ho/in_text.htm
- Using American Psychological Association (APA) Format (Updated to 5th Edition)
 - http://owl.english.purdue.edu/handouts/research/r_apa.html
- The Research Paper: Writing and Citing http://www.ithaca.edu/library/research/writingciting.php

