Databases: Computer science and other research areas

A suggested sequence to achieve good recall

https://www.his.se/en/library/search-and-evaluate/databases/

LibSearch

- Type: discovery system – covers several content providers and our library catalogue
- Partly full text (vast access to subscriptions)
- Save queries and records (use/create an EBSCOhost account)

LibSearch search features

- Truncation: *
- Boolean logic: AND, OR, NOT
- Proximity operators: Nn (not more than n words in between in any order), Wn (not more than n words in between in specified order)
- Phrases, e.g. "neural networks"

Also try separate (more precise) searches in e.g. Scopus, Web of Science, IEEE Xplore, PsycInfo, Medline, CINAHL

Scopus

- Type: composite database – covers **ACM Portal**, **IEEE Xplore**, **Lecture Notes in Computer Science**, Medline
- Citation links (including citation links in reference lists in individual records) and links to potentially relevant documents based on shared links (see Related documents)
- Full text sometimes provided (see View at Publisher)

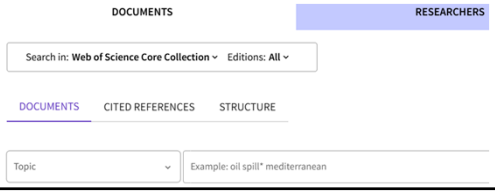
- Save Search Alerts, Author Citation Alerts, Document Citation Alerts
- AI tool: Scopus AI

Scopus search features

- Truncation: * anywhere in a word; mask: ? (one character per ?)
- Boolean logic: AND, OR, AND NOT
- Proximity operators (also allowed next to parentheses but not including AND or AND NOT): W/n (not more than n words in between in any order), PRE/n (specified order)
- Phrases, e.g. "neural networks"; exact: {neural networks}
- Field codes, e.g. TITLE-ABS-KEY("neural networks"); KEY("neural networks")

Web of Science/ISI

- Type: bibliographic reference database with the subsections **Science** Citation Index, **Social Sciences** Cit. Ind., **Arts and Humanities** Cit. Ind., **Conference Proceedings** Cit. Ind.- Sci., Conf. Proc. Cit. Ind.- Social Sci. & Hum.
- Citation links to cited works, citing works, works that share references and more specific "cited reference search" to find articles that cite a work
- Save queries, alerts (including citation alerts)



Web of Science search features

- Truncation: *; mask: ? (one character), $ (no or one character); see also search settings (spelling variations and lemmatization)
- Boolean logic: AND, OR, NOT
- Proximity operators (also allowed next to parentheses): NEAR/n (not more than n words in between in any oder); SAME (terms must be in the same address in the address field, AD)
- Phrases, e.g. "neural networks" (" turns off lemmatization)
- Field codes (Advanced Search), e.g. TS="neural networks" AND AD=(Austin SAME Texas)

Dimensions

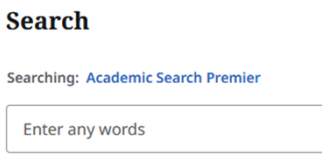
- Type: bibliographic reference database, larger/broader than Scopus and Web of Science
- Citation links to cited works and citing works
- Account with export center to receive exported results
- AI tool: Dimensions Research GPT

- Boolean logic: AND, OR, NOT
- Phrases, e.g. "neural networks"

Academic Search Premier

(interface similar to LibSearch, which supports EBSCO accounts)

- Type: article database with broad subject coverage
- Mainly full text
- Information about peer review in journals (optional limit when searching, not specified to article level)
- Save queries and alerts

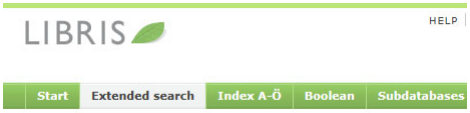


Acad. Search Prem. search features

- Truncation: *; mask: ? (one character), # (no or one character)
- Boolean logic: AND, OR, NOT
- Proximity operators (also allowed next to parentheses): Nn (not more than n words in between in any order), Wn (not more than n words in between in the specified order)
- Phrases, e.g. "neural networks"
- Field codes, e.g. SU neural networks (see Choose Databases>Detailed View for field codes and other database specific help)

LIBRIS

- Swedish union catalogue: covers library holdings, not least literature related to Sweden (in principle every book published there)
- Mainly books, including dissertations (see limits in search results or Extended search: Material type/s/; see **SwePub** for additional research publications from Sweden)
- Advanced search features (see Boolean)
- Sometimes subject terms in English



Further resources

- CiteSeer – full text
- ACM Portal (see also Scopus) – full text
- IEEE Xplore (see also Scopus) – partly full text
- ArXiv (physics and related disciplines) – full text archive
- DBLP: Digital Bibliography & Library Project (includes ACM and IEEE)
- HCI Bibliography – some full text (e.g. ACM publications)
- SwePub – Swedish research publications (partly overlapped by LIBRIS)
- PQDT Open: ProQuest Dissertations & Theses – open access (see also collections in Web of Science)
- BASE: Bielefeld Academic Search Engine – for academic repositories worldwide
- Google Scholar – web search engine for academic sources

ACM Portal

(included in Scopus)

- Full text from Association for Computing Machinery (Digital Library) and references to other literature (The ACM Guide to Computing Literature)
- Citation links
- Save alerts, binders (collections of citations), tables of contents
- Browsing options are vast
- Advanced search: boolean operators (cf Google Advanced Search)
- Computing classification system (terms): https://www.acm.org/about/class/

IEEE Xplore

(included in Scopus)

- Full text from Institute of Electrical and Electronics Engineers
- Citation links (citing documents) and links to "related content"
- Save searches, RSS, e-mail alerts; download citations
- Browsing
- Advanced search and command search with explicit examples
- Index terms include Inspec terms

IEEE Xplore search features

- Several controlled vocabularies (INSPEC ...)
- Truncation (left/right) and masking: * (up to ten truncated words allowed); ? (one character)
- Boolean logic: AND, OR, NOT
- Proximity operators (command search; also allowed next to parentheses): NEAR/n (not more than n words in between in any order), ONEAR/n (not more than n words in between in specified order)
- Phrases, e.g. "neural networks", including for words with non-alphanumeric characters (e.g. "plug-in")
- Field codes, e.g. "Index Terms":"neural networks" (combined field search)

https://ieeexplore.ieee.org/Xplorehelp/searching-ieee-xplore/search-tips

ScienceDirect

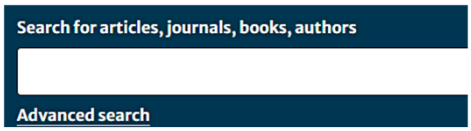
(Elsevier – see Scopus)

- Full text collection covering several domains
- Alerts (create an Elsevier account)
- Search specific publication types

Springer Nature Link

(included in Scopus (Lecture Notes in Computer Science))

- Full text collection covering several domains; includes Lecture Notes in Computer Science
- Save "favorites", searches and alerts
- Browse and search subject collections and specific publication types



Springer Nature Link search features

- Truncation and masking: *, ?
- Boolean logic: AND, OR, NOT
- Proximity operators (command search; also allowed next to parentheses): NEAR (not more than ten words in between in any order), NEAR/n (not more than n words in between in any order), ONEAR (words next to each other in the specified order)
- Phrases, e.g. "neural networks"

https://support.springernature.com/en/support/solutions/articles/6000271990-search-options-on-springerlink

CiteSeer

- Full text (users may submit content) and reference database focused on computer science (check "Include results without PDF" to find "citations for which we have no accompanying document file")
- Citation links
- Save references, monitor changes to documents

DBLP: Digital Bibliography & Library Project

- Computer Science (free resource)
- Some full text links (e. g. ACM Publications)
- Search examples:
  software development = software AND development
  error|mistake = error OR mistake [use | without spaces!]
  Truncation: automatic; e.g. soft includes software
- Exact word: software$ = software (but not e.g. soft)
- Use "Refine list" to refine your search (after executing an initial search)

HCI Bibliography

- Human Computer Interaction Resources (free resource)
- Some full text links (e. g. ACM Publications)
- Specific search language
- Search examples: error|mistake = error OR mistake
  child ~baby = child NOT baby
- No phrase searches
- Truncation * only at the end of words
- Do not use boolean operators
- Use for example Limit, Source and Type to refine your search (after executing an initial search)

Databases from other domains

- Business Source Premier (economics, marketing) – some full text
- CINAHL (nursing; cf Acad. Search Premier)
- ERIC (Education Resources Information Center) – broad reference database including some full text
- Medline (EBSCO) and PubMed
- Project MUSE (humanities, social sciences) – reference database
- PsycInfo (psychology) – broad reference database

Business Source Premier

(EBSCO; cf e.g. Academic Search Premier)

- Type: covers scholarly (peer reviewed) journals and other sources on economics/business and marketing
- Some full text
- Information about peer review in journals (optional limit when searching, not specified to article level)
- Save queries and alerts

Business Source Premier search features

- Truncation: *; mask: ? (one character), # (no or one character)
- Boolean logic: AND, OR, NOT
- Proximity operators: Nn (not more than n words in between in any order), Wn (not more than n words in between in specified order)
- Phrases, e.g. "neural networks"
- Field codes, e.g. SU neural networks (see Choose Databases for field codes and other database specific help)

PsycInfo

- Citations and abstracts for scholarly literature in psychology and related fields
- Truncation: *
- Boolean logic: AND, OR, NOT
- Proximity operators: ADJn (not more than n words in between in any order), ADJ (words next to each other in the specified order)
- Thesaurus (Search tools)
- Add limits to refine your search (for example methodology)

Examples

Scopus:

((comput* OR digital* OR video) W/3 (game* OR gaming)) AND (graphic* OR image* OR visual*)

Web of Science (Topic search):

((comput* OR digital* OR video) NEAR/3 (game* OR gaming)) AND (graphic* OR image* OR visual*)

Academic Search Premier, Business Source Premier, CINAHL (EBSCO), Medline (EBSCO):

((comput* OR digital* OR video) N3 (game* OR gaming)) AND (graphic* OR image* OR visual*)

PsycINFO (Ovid; Advanced search):

((comput* OR digital* OR video) ADJ3 (game* OR gaming)) AND (graphic* OR image* OR visual*)

Additional tools

- **ChatGPT**: ask questions, e.g. to get suggestions for search strategies or to summarize texts. Incl. Dimensions Research. https://chat.openai.com/
- **Elicit**: can answer questions by searching for and summarizing publications (create account; extract data form PDFs). https://elicit.com/
- **Inciteful**: connect papers through literature (start with one paper or explore connections between two papers). https://inciteful.xyz/
- **Keenious:** upload a paper and find more papers. https://keenious.com/
- **Open Knowledge Maps**: generate literature maps from search terms. https://openknowledgemaps.org/index
- **Perplexity**: ask questions, e.g. to get suggestions for search strategies or to find some papers. https://www.perplexity.ai/
- **Research Rabbit**: collect papers and generate citation networks, find similar work etc. https://www.researchrabbit.ai/
- **Scopus AI**: broad searching, short summaries etc. Scopus content
- **Semantic Scholar**: broad searching, short summaries etc. https://www.semanticscholar.org/

Search tools for systematic reviews

See e.g. Cochrane, PubMed Clinical Queries. Registered study protocols can be searched: https://www.icmje.org/about-icmje/faqs/clinical-trials-registration/ – see especially: https://trialsearch.who.int/Default.aspx, https://www.clinicaltrials.gov/, as well as systematic studies: https://www.crd.york.ac.uk/prospero/ (protocols can be registered there in advance)