

The production of a researcher is essentially

- Scientific papers (journals, conferences, books etc. . .)
- Soft and hardware prototypes/demonstrations
- Expertise reports, consultancy, courses
- Patents

Reviews

A researcher is often required to participate in the evaluation of the work of other researchers (**peer-reviewing**) for the purpose of

- publishing in well-established journals/conferences
- promotion in academia (tenure, etc. . .)
- attribution of grant fundings
- research awards

This reviewing work is usually *anonymous*.

Patents

A patent is a set of exclusive rights granted by a state to an inventor or his assignee for a fixed period of time in exchange for a disclosure of an invention. [Wikipedia]

In practice, a patent is a legal right to **exclude** others to make use of an invention.

Not everything can be patented

- *formulae*, *theories* are excluded
- *softwares* can be patented in the US but not in Europe
- new *devices*, chemical *elements* or *methods* can be patented

A patent often conflicts with the freedom of academic research.

There are *too many* journals/conferences, and *too many* papers per issue. Research databases, with built in *search engines* put some *order* in this world.

Research databases are in particular essential

- to keep track with/build up *knowledge* on a specific topic
- to build *bibliographies* (e.g., for writing papers)
- to make *connections* between separated fields
- to help find *solutions* to specific problems

... but there are also *too many* databases...

Main databases

A large quantity of databases are available at CUHK central library

<http://www.lib.cuhk.edu.hk/>

The most useful general purpose/engineering databases are

- *Google Scholar*: <http://scholar.google.com/>
- *IEEE Xplore*: <http://ieeexplore.ieee.org/>
- *Web of Science*: <http://www.isiknowledge.com/>
- *INSPEC* (follow the library link)

How to choose a database

General rules

- *Google Scholar*, for quick, lazy searches
- *IEEE Xplore*, for searches within the IEEE publications
- *Web of Science*, for citation-related searches
- *INSPEC*, for global engineering searches

It may be useful to combine the search over several databases.