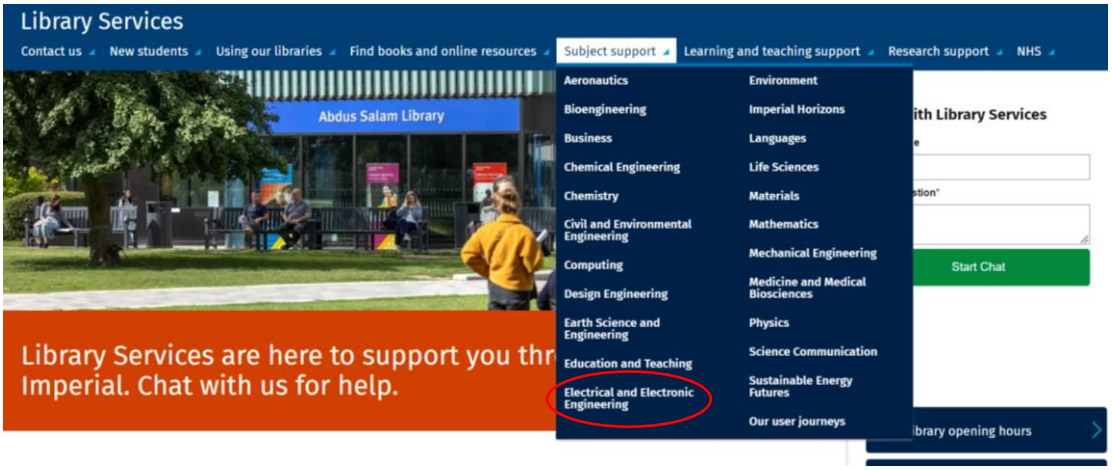
Searching academic databases

What are academic databases?

Academic databases are **curated, subject-specific, references to academic material** such as peer-reviewed journal articles, book chapters, conference papers and theses. Databases also give access to the **full-text** of this material. Searching databases will save you time as they search across multiple sources at once.

How to access databases?

1) Discover the range of available databases on **EEE Subject Support library page**: www.imperial.ac.uk/admin-services/library/subject-support/electrical-and-electronic-engineering/



2) You can access database on and off-campus, using your college credentials. For more guidance on accessing databases and other e-resources off-campus see our **online guide**

Searching academic databases

Plan your search.

- Before you begin your search, think about the keywords you need to use in your search.
- Keep a record of your what you have searched, the search terms used, and the databases searched.

Search tips:

Step 1: Identify the **key concepts/keywords** relevant to your topic.

Example topic: Level-crossing analog-to-digital converter modeling for electrocardiogram sampling

The keywords are:

Level-crossing analog-to-digital converter, electrocardiogram and **modeling**

Step 2: Think of possible **synonyms/alternative words** for your chosen keywords.

e.g. in the above example, possible synonyms include:

Level-crossing analog-to-digital converter	**electrocardiogram**
Level crossing ADC	ECG
LC-ADC	

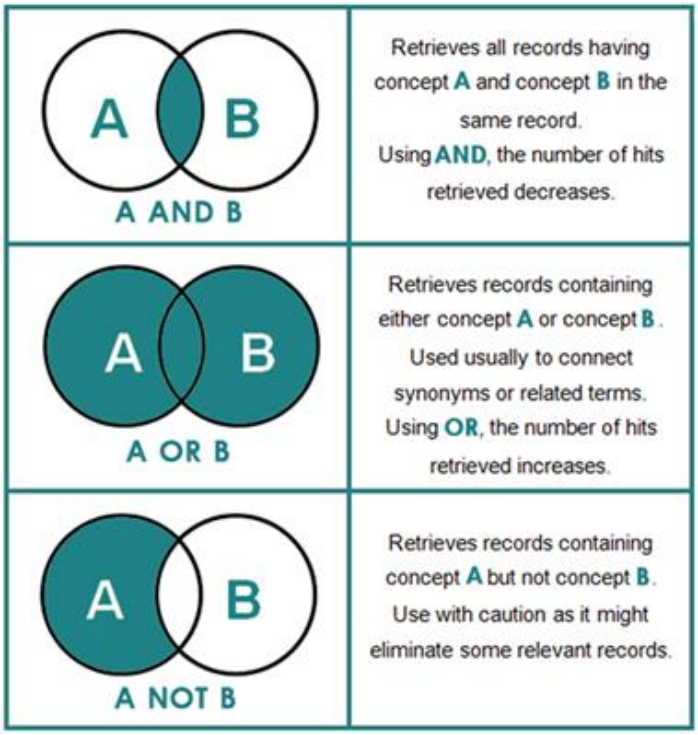
Step 3: Use operators

- **"Phrase searching" to narrow your search** - placing quotation marks around two or more words to create a search term. This forces the database to search for those words as a phrase and not as individual words.
  e.g. "Level-crossing analog-to-digital converter", "Level crossing ADC"

- **Truncation * to expand your search** – by placing an asterisk * at the root of a word, the database with search for different word endings, spellings, singular/plural forms of that word. For example, in the case of the word **converter**:

  e.g. convert* = convert, converter, converters, conversion, etc.

- **Use connecting operators:**
  - **AND -** narrows your search
  - **OR** - expands your search
  - **NOT** - narrows by excluding terms from your search



Step 4: Create a **search string**, using the connecting operators to combine the keywords and synonyms. For example:

"Level-crossing analog-to-digital convert*" **OR**
"Level crossing ADC" **OR** LC-ADC

AND

Electrocardiogram **OR** ECG

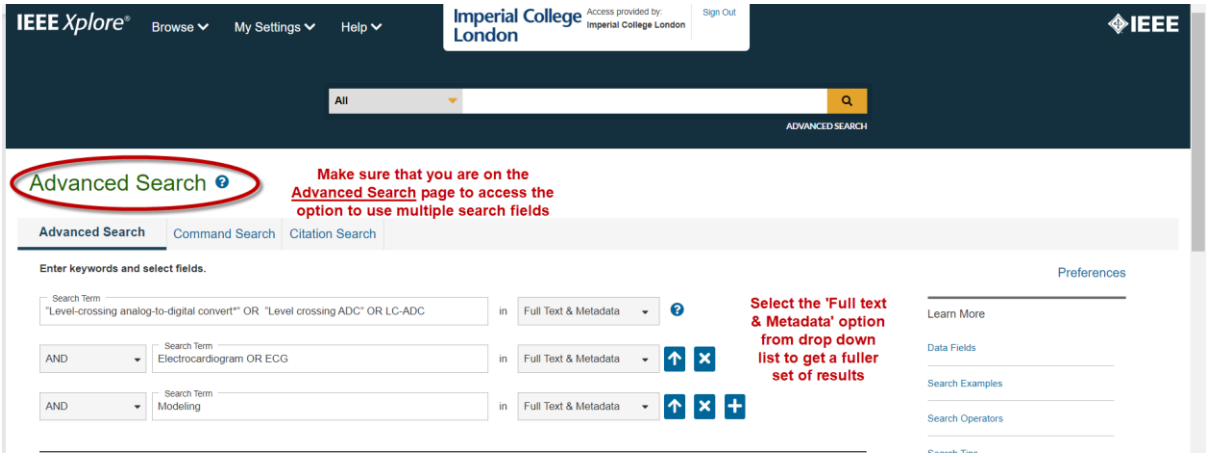
AND

Modeling

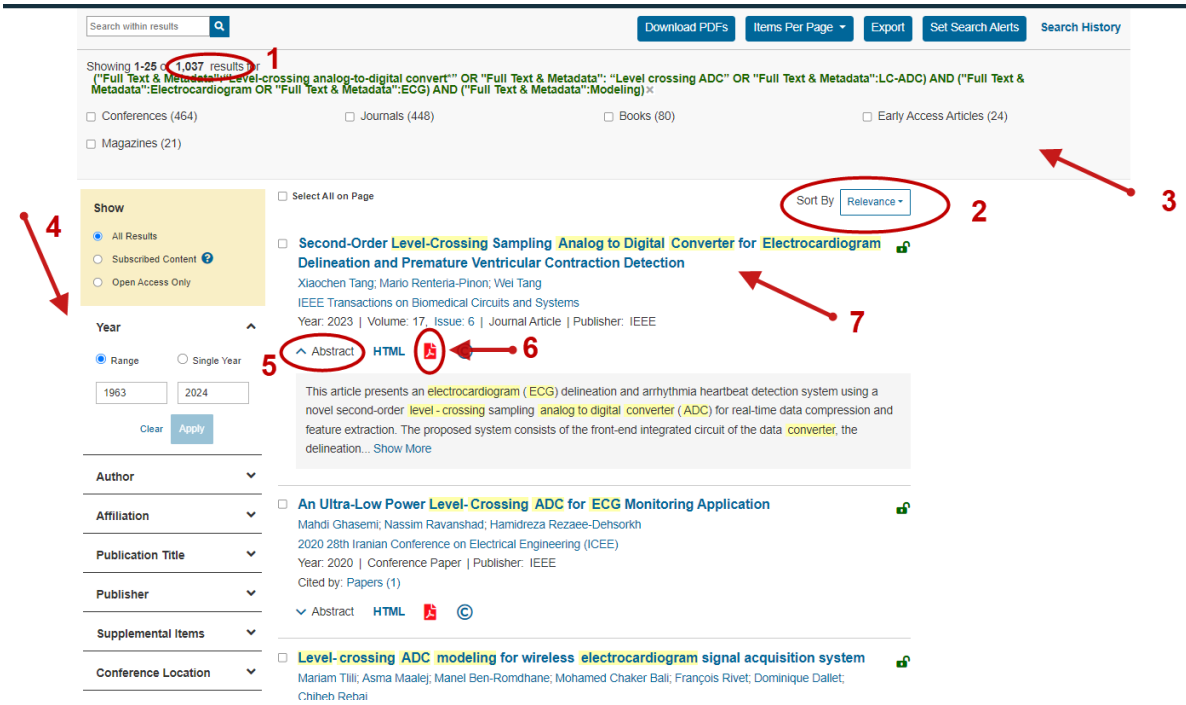
NOTE: Watch this short video (6.41 mins) for more guidance developing search strategies.

Database example (IEEE Xplore)

Below is an example (from IEEE Xplore) of what the above search string looks like in a database search. Note the connecting operators – **And** and **OR.**



Below is an example of the search results page:



As you will notice, the matching keywords from the search string are highlighted in yellow to make it easier for you to see the most relevant articles.

1 – Number of results found

2 – Option to sort results by a range of different categories, e.g. Relevance, i.e. matching keywords, dates, citations, etc.

3 – Option to refine your results by document type.

4 – Option to refine your results using a range of filters such as publication year, author, etc.

5 – Option to read the abstract which will provide you with a summary of what the article is about.

6 – Option to access the full text of the article as a PDF.

7 – Bibliographic details of the paper which you will use when referencing this article.

Below is an example of one of the articles:

1 – Option to export the reference to a reference management software tool, e.g. RefWorks, BibTeX, EndNote, etc. (Please note, some databases will offer a 'download' or an 'Export' option instead of a 'Cite This' option).

2 – Keywords associated with the article, which you could use to find other relevant papers.

3 – Other suggested papers on the same topic that might be useful to you.