Structure of scholarly literature

• **Primary resources** — represent the state of research area, info on methods and protocols — journal articles, theses/dissertations, patents, conference papers, technical reports

• **Secondary resources** — publications that abstract, index or otherwise break down and group the information and ideas appearing in the primary literature — bibliographies, abstracts&indexes, catalogs

• **Tertiary resources** — important for young researchers, additional input — review articles, chapter-books, treatises, handbooks, graduate-level texts, encyclopedias etc. (they are good starting point for new area of research, but not a finishing point for preparing your own experiments and publications)
Search techniques

**Keyword search** – start with broader terms than narrow results, key concepts, alternative terms, refining search

**Concept search** – putting quotation marks around two or more words to create search concept or phrase (“heart attack” “genetic engineering”)
Secondary resources

• 2 MOST COMPREHENSIVE DBs:

WOS

SCOPUS
Web of Science

- WOS CC indexes more than 20,000 journals and contains more than 60 million records
- Complete coverage since 1900, all authors, all affiliations and all cited references
- Cover to cover indexing
- All research disciplines – 253 subject categories
- High selectivity and neutrality – indexes the most influential scientific journals
- International content – more than 80 countries, 32 languages
- Open Access journals
Web of Science
Web of Science - search

Search
by topic, by author, by source title, and by location

Two chemistry databases, **Index Chemicus** and **Current Chemical Reactions** allow for the creation of structure drawings, thus enabling users to locate chemical compounds and reactions.
Web of Science - interface

Product menu = instant access to InCites - JCR - ESI - Endnote - Publons

WHERE

Choose database for searching

Topic databases

Regional databases
Web of Science - interface
Web of Science – search modules

• Basic Search

• Author Search

• Cited Reference Search

• Structure Search

• Advanced Search
Web of Science - language

• All articles are indexed in natural language

• Preferred language is English (titles, abstracts and key words are always available in English)

• Other information might be stored in different languages
Web of Science – search rules

- Capitalisation
- Search Operators
- Wildcards
- Phrase searching
- Parentheses
- Apostrophes
- Hyphens
Web of Science - capitalisation

Doesn’t matter
UPPER CASE
lower case
MiXed CAse
**Boolean operators**

**AND**
Using AND, this search would only retrieve results with Peanut Butter and Jelly.

**OR**
Using OR, this search would retrieve results with peanut butter, with jelly, and with both.

**NOT**
Using NOT, this search would retrieve results with peanut butter, and exclude those with jelly or PB with jelly.
Web of Science – search operators

The use of search operators (AND, OR, NOT, NEAR, SAME) will vary in each search field

**AND** in the Topic field (not in the Publication Name, Source)

**NEAR** in most fields, not in the Year Published field

**SAME** in the Address field, not in other fields
Web of Science – truncations/wild cards

**Truncation** is a searching technique used in databases in which a word ending is replaced by a symbol

* (asterisk) – substitutes zero or more characters

? (question mark) – substitutes one character

$ (dollar) – substitutes zero or one character
Web of Science - truncation

child*  
children  
childhood  
politic*  
politics  
political  
politician  
advertis*  
advertise  
advertising  
advertisement  
gene*  
genes  
genetic  
geneticist  
genetically
Web of Science – phrase searching

When you are searching for phrase (words in exact order) in topic or title search use quotation mark signs “ ...”

For example:
“energy saving”
“energy consumption”
“energy conservation”
### Search History: Web of Science™ Core Collection

<table>
<thead>
<tr>
<th>Set</th>
<th>Results</th>
<th>TopIC:</th>
<th>Indexes:</th>
</tr>
</thead>
<tbody>
<tr>
<td># 2</td>
<td>2,703</td>
<td>&quot;cognitive behavioural therapy&quot;</td>
<td>SCI-EXPANDED, SSCI, A&amp;HCI, CPCI-S, CPCI-SSH, ESCI Timespan=All years</td>
</tr>
<tr>
<td># 1</td>
<td>21,414</td>
<td>(cognitive behavioural therapy)</td>
<td>SCI-EXPANDED, SSCI, A&amp;HCI, CPCI-S, CPCI-SSH, ESCI Timespan=All years</td>
</tr>
</tbody>
</table>

- **Exact phrase search (using " "):** 2703 results
- **Keyword search (combined using OR):** 21414 results
Web of Science - combinations

Truncations and phrase searches might be combined

Example “raw material*”
Web of Science - parentheses

We use parentheses to group compound Boolean operators.

Examples
(Antibiotic OR Antiviral) AND (Alga* OR Seaweed)

(Pagets OR Paget's) AND (cell* AND tumor*)
Apostrophes are treated as spaces, not searchable characters. Be sure to search for variants with no apostrophe. Example:
Paget's OR Pagets finds records containing Paget's and Pagets.

Search for hyphenated words and phrases by entering the terms with and without the **hyphen**. Example:
speech-impairment finds records containing speech-impairment and speech impairment
Web of Science – search results
Web of Science – refining results

Refine your search according your preference, using Refine Results Filters.

Click „more options/values” for up to 100 variants.

Confirm your selection using „Refine”

Discover more than 6 millions Open Access articles newly available in WOS.

Find out who is

What Organization might be potential cooperator for your research
Web of Science – record management

MARKED LIST
Save the records to your temporary file, unsaved marked list will be deleted

Save your Marked list for further work (Marked List – „Save“ – fill in the marked list title and it’s description if needed)

All saved records will be available for future work – Marked List – „Open/Manage“
Web of Science – search results

What can we do with our result?
Get full text from publisher or Google Scholar, get OA articles or download, select, print, share, save to EndNote (online or desktop) or to Researcher ID (I Wrote These Publications), save in different formats (including RD file, SD file).

We can see metrics from Journal Citation Reports – journal impact factor, JIF categories

We can discover related articles using Citation Network

Output options are available from Results and Full Record pages
Web of Science – search results
Web of Science – citation network

Backward citations - **Cited References** - all the research literature used to write the article or paper, also known as bibliography.
Forward citations - **Times Cited** - the articles or papers citing the viewed record. To get an idea of the more recent developments in citation performance.
**Related Records** the records and research fields that are closely related to the original article.
Web of Science – citation network

- Citation network provides related research for our topic
- Follow the relations set up by scientists themselves
Web of Science – citation connections
Web of Science – attribution identifiers for authors

- **RESEARCHER ID** Identifying system for scientific authors, unique identifier to solve the problem of author identification (problem: same names, same initials, different spelling etc.), on the ResearcherID website authors are asked to link their ResearcherID to their own articles, enables data exchange between its database and ORCID, and vice versa.

- **ORCID** Purpose: to solve the author/contributor name ambiguity problem in scholarly communication by creating a central registry of unique identifiers. ORCID is managed by individual authors. Stores bibliographic and professional information, same as articles written by authors. ORCID number can also be searched in the 'Author Identifiers' field from the WOS landing page. ORCID numbers are harvested and appended to WOS records monthly.
Web of Science – citation report

Citation report can be built from any results list in WOS

A citation report is a collation of **bibliographic details** for the documents an individual has authored, along with the **number of times those documents have been cited**

This report may be used to support:

• Job applications
• Academic promotions
• Grant applications
• Academic credibility

The intended purpose of the report might influence what is included and how the information is presented
Web of Science – citation report

- Create Citation Report for an author or institution
- Graphs of publication activity and citation rate
  - Articles published in particular year
  - Received citations by year
- Citation metrics related to retrieved results
  - Sum of the Times Cited
  - Average Citations per paper
  - h-index
Web of Science – usage count

Complementary sorting of retrieved results (articles) Usage count can react faster on user’s preferences.

Represents new trends in science (developing science topics) Usage is counted for last 180 days or since 2013

What is considered as usage: full text usage (full text from publisher) and record exporting (to reference manager, saving record to personal folder).
Web of Science – usage count

Sort the results using **USAGE COUNT**
Last 180 days
For last 2013

Complete Usage might be visible.
Web of Science – citation alert

- When you create a **citation alert**, WOS notifies you by e-mail whenever a document has been cited by a new article, weekly or monthly for a topic search, or an email alert for the latest Table of Contents from a journal.
- The alert is active for one year. You may renew the alert at any time.
- Alert emails can be received in various formats, such as: Plain Text, HTML, EndNote, or Field Tagged.
- Alerts can be setup via the Tools tab and then selecting the Saved Searches & Alerts.
Scopus
Scopus

- Scopus is a large abstract and citation database of peer-reviewed journal articles, books, conference proceedings and patents
- 28,000,000 records with references after 1995
- 21,000,000 pre-1996 records (back to 1823)
- Nearly 20,500 journals from 5000 publishers, including open source
- 5.3 million conference papers (proceedings and journals)

- The data in Scopus is highly structured, every piece of information is tagged, even down to the initials of the author in a reference inside an article’s list of references
Scopus

Publishers indexed in Scopus

- 10% ELSEVIER
- 8% Springer
- 5% Wiley-Blackwell
- 5% Taylor & Francis
- 2% Sage
- 1% Oxford University Press
- INDERSCIENCE publishers
- BENTHAM SCIENCE
- Cambridge UNIVERSITY PRESS
- Emerald
- macmillan Publishers

60% Others
Scopus – selection criteria

To be included, a journal must:

• have English abstracts
• have at least 1 issue per year
• have strong ethics – non-predatory
• be peer-reviewed

Scopus also covers scholarly monographs (and excludes undergrad textbooks).
Scopus

- Use Scopus to **search on your topic** when you want search results that are interdisciplinary and include international literature.

- Use Scopus when you would like to see **results ranked** by times cited and relevance and as well as by date.

- Look up an important paper on Scopus and see the **reference list** as well as the **forward cites** to the paper.

- Use Scopus to set **citation alerts**. Who is citing your work?
Scopus – search

These three fields contain the most relevant information and provide the best starting point:

• TITLE: Should contain the most relevant terms to the literature

• ABS: The article abstract should be a condensed summary of the full-text

• KEY: Author keywords express what authors or journal editors consider to be important keys to the article content. Indexing vocabulary terms from subject-specific databases like EMBASE, MedLine or Compendex are also included in the Keyword search.
Scopus – searching phrases

If you do not specify anything between two words, Scopus automatically joins them with AND, so the words in the phrase may not be searched together. You’ll get more results, but probably not what you were looking for.

To search for a phrase in Scopus use double quotations marks ("). Doing so tells Scopus this is a “loose phrase,” meaning that the words must be together and will allow for wildcards and lemmatization (finding both singular and plural forms).
Scopus – what does automatically

- **Accented characters**: work with or without the accent included

  Example: Dvořák and dvorak both return the same results

- **Lemmatization**: (similar but not quite the same as truncation or stemming) means that singular and plural forms, as well as adjectives, will be found if you type any of the variants. You can override this behavior by using the EXACT PHRASE marker—accolades or curly brackets—which will give an exact match of what you type (this does not apply to accented characters).

  Examples: attack and attacks; wide and wider
Scopus – what does automatically

- **Equivalents:** will find the equivalent terms/symbols
  Example: $\omega$ and omega; behaviour and behavior

- **Punctuation:** Commas, hyphens, ?, ! etc., are ignored

- **Stop words:** Words like “the,” “it,” and “of” are excluded from search (Refer to the list found in Scopus help)

- **Override with Exact phrase:** { } will find only an exact match for a word, phrase or character (including stop words)
Scopus – proximity operators

By including proximity operators in your search, you may find articles you might otherwise miss.

There are two proximity operators you can use:

**Preceding (Pre/n):** The first word must be no more than (n) words apart from the second word

**Within (W/n):** It doesn’t matter which word comes before the other

Example for W/n: Enter your search using the within operator, for example zika W/2 virus

  This would look for ‘virus infection with zika,’ ‘Virus like zika,’ ‘virus, zika,’ ‘zika virus,’ etc.
In any word or “loose phrase” you can use wildcards to help when you’re unsure of spelling, or when a word has multiple spelling variations, or if you’re looking for chemicals. There are two wildcard types ? and *

? represents any single character
Example: wom?n retrieves both woman and women

* represents any number of characters, even zero
Examples:
comput* returns computer, computers, computerize and computerization
*tocopherol finds α-tocopherol, γ-tocopherol, δ-tocopherol, tocopherol, etc.
WOS – Scopus – GS comparison

- Before 2004 WOS and Scopus, 2004 launch of Google Scholar
- Revolution in searching, finding and accessing information
- WOS, Scopus have selective journal-based inclusion policies
- GS with errors and limitations, because of automated approach to document indexing, has good coverage of disciplines and languages
- GS citation data is basically a superset of WOS and Scopus with additional coverage (non-journal sources – theses, books, conference papers, unpublished materials)
OUR LIBGUIDE ON SEARCHING IN KORAL [HTTP://LIBGUIDES.KAUST.EDU.SA/SUMMONSEARCH/HOME]
If you need help

Email to: library@kaust.edu.sa
Use LIBCHAT
Email to me: nevena.tomic@kaust.edu.sa
THANK YOU!