### Database Search Tips

<table>
<thead>
<tr>
<th>Search Options</th>
<th>Engineering Village (Inspec &amp; Compendex)</th>
<th>ProQuest (ProQuest Dissertations, etc.)</th>
<th>Web of Science Core Collection</th>
<th>EBSCOhost (Applied Science &amp; Technology)</th>
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<tbody>
<tr>
<td><strong>Proximity operator, within # words, in any order</strong></td>
<td>NEAR/# [Truncation and quotes are not allowed with proximity operators] Example: laser NEAR/4 diode</td>
<td>NEAR/# [Truncation and quotes are allowed with proximity operators] Example: (radar OR antenna*) NEAR/2 infrared. Example: radar NEAR/3 “signal processing”</td>
<td>NEAR/# Example: (sensor OR detect*) NEAR/3 acoustic*</td>
<td>N# Example: (wireless OR radio ) N5 (detector* OR sensors)</td>
</tr>
<tr>
<td><strong>Proximity operator, within # words, in the exact order entered</strong></td>
<td>ONEAR/# Example: semiconductor ONEAR/1 lasers. [ONEAR and NEAR cannot be used with truncation, wildcards, parenthesis, braces or quotation marks]</td>
<td>PRE/# Example: integrated PRE/0 circuit*</td>
<td></td>
<td>W# Example: light W1 modulators</td>
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<tr>
<td><strong>Truncation</strong> character retrieves variations of the search term. Use at the end of term’s root, for right-hand truncation</td>
<td>Asterisk (<em>). model</em> [Autostemming ON: stemming determines the suffixes; all search terms must be stemmed]</td>
<td>Asterisk (*) replaces up to 5 characters; [^n] replaces up to a maximum of 20 characters</td>
<td>Asterisk (<em>) Asterisk (</em>) represents any group of characters. Example: simulat*</td>
<td>Asterisk (<em>) Example: comput</em> to find the words computer or computing</td>
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<tr>
<td><strong>Search terms in specific fields</strong></td>
<td>For Quick search use drop down field menu. Browse author index with and without comma, after last name; with initials &amp; with full first name. Expert search: use WN such as (optics WN KY)</td>
<td>Advanced drop down field menu, such as [Anywhere except full text – NOFT]. Field code examples: AU(smith) TI,SU,AB(solar cells)</td>
<td>Basic search drop down field menu, such as search within Topic, Title, Author fields. Example: for Cited Reference search, can browse by [Cited Author] using [Select from index]</td>
<td>Advanced search drop down field menu, or use upper case field codes</td>
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### Database Search Tips (Continued)

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<td><strong>Combine previous search statements</strong></td>
<td>Top row &quot;Results&quot; - &quot;View all results&quot; -- &quot;Search history&quot;. Use &quot;Combine searches&quot; to combine previous search statements. Example: (#2 AND (microelectr* wn TI)) NOT #1 Create alerts; Save searches; Edit this search</td>
<td>Advanced Search &quot;Recent searches&quot; (top row), or Recent searches icon (top right). Combine searches example: (1 AND 2) AND (optic* OR electroopti*). Actions: Create alert; Modify search; Save search</td>
<td>Advanced Search: &quot;Search History&quot; Combine Sets example: (#2 AND #3) NOT #1 Saved searches and Alerts; Edit</td>
<td>&quot;Search history&quot; Search with AND; Search with OR. Saved searches, Alerts, Edit</td>
</tr>
<tr>
<td><strong>Search multiple databases at the same time</strong></td>
<td>&quot;Databases&quot; (row, left side): check relevant database boxes. <strong>Check both Compendex and Inspec boxes.</strong> Conduct search, click on &quot;Remove Duplicates&quot; (left column) then &quot;Database Preference&quot; (Inspec or Compendex)</td>
<td>Search multiple databases at one time, removing duplicate records. Left top row: click on Databases. <strong>Check boxes</strong> for relevant databases, such ProQuest Dissertations and Theses, US Newstream, ABI/INFORM, etc. Click on &quot;Use selected databases&quot;</td>
<td>To search all Clarivate Analytics databases, select &quot;All Databases&quot; from the top &quot;Select a database&quot; drop down menu. To search only selected databases: &quot;More settings&quot; then check boxes (such as Medline and Web of Science Core Collection)</td>
<td>&quot;Choose Databases&quot; and check relevant boxes</td>
</tr>
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</table>
(A1 or A2) AND (B1 or B2)
"OR" Boolean operator: "A1 or A2" - - Keywords/phrases -- at least one of them must be in the record

Red - Set A and Set B and Set C

**Narrow and Broaden Search Strategy**

- If you retrieve **too many records**, narrow your search by
  - Creating an **additional set** (A1 or A2) AND (B1 or B2) AND (C1 or C2)
  - **Restricting** keywords to
    - **Title Field**, using title field codes such as TI=, wn TI, TI:; TI(keywords)
    - **Subject Headings (Thesaurus and Identifier Fields)**, such as Controlled Terms, Uncontrolled Terms, wn CV, wn FL, DE=, SU=, ID=, MH:, su(keywords)
  - Use of **Proximity Operators** for adjacency, same field, within the same subfield, phrase searching, etc., such as quotes " ", NEAR/#, ONEAR/#, PRE/#, n2, w3, etc.
- If you retrieve **too few records**
  - Check for **similar** concepts in the **title, abstract, subject heading** fields, and bibliography (synonyms, etc.)
  - Look for concepts which have **equal importance** (A1 or A2) AND (B1 or B2 or D1 or D2)
- **Spell out acronyms and abbreviations.**
- Include **alternative spellings** such as modeled or modelling, fiber or fibre (British and American)
- Ask for help with **author names** (spaces, commas, initials, and format/variant differences).
- Check for **truncation** symbols (* ? +) and proximity operators (near/# etc.)
- Check for the ability to **manipulate previous search statements** or search history, such as (#7 or (#8 and engineer*)) not #6. Some systems allow combinations of search statement numbers and keywords.
- To **broaden** a search, combine terms using **OR** (results contain any specified term). To **narrow** the scope of a search, combine terms using **AND** (results contain all specified terms). To eliminate **previous** search statement numbers from a search, use the **NOT** operator. You can use parentheses to specify the order of operation. Terms and operations within the parenthesis are executed before terms and operations outside the parenthesis.
- **Watch for truncation overflows.**
Search Hints

http://www.prism.gatech.edu/~bw21/chart.htm
http://www.prism.gatech.edu/~bw21/

- Databases such as Ei Village Compendex/Inspec, ProQuest databases, and Web of Science databases provide powerful search software:
  - Complex searches using **nested Boolean** operators (**AND** OR **NOT**)
  - **Multiple search statements** (Search history, Recent searches). Recombine with search statement numbers and keywords
  - **Proximity operators**, such as **NEAR/#** (within # words) or **quotes** ("exact phrase")
  - **Combine multiple databases together** into one search
  - **Truncation** (often *), wildcards
  - **Limit to Title/Subject** headings fields, Author field, Title/Abstract/Subject field, etc.
  - **Avoid searching full text** fields (ProQuest – use “ALL”)

- Most database platforms have tutorials or search hints

- Search example:
  1. model* OR simulat* OR algorithm*
  2. bioengineer* OR biotech* OR ((biolog* or biomed*) and engineer*) OR biomechanic*
  3. micromechan* OR nanoelectr* or (micro mechan*) or (nano electr*)
  4. biosensor* or sensor*
  5. ((bioeng* OR ("biomedical engineering")) wn TI)
  6. ((bioeng* OR biomed*) wn CV) or ((bioeng* OR biomed*) wn FL)
  7. (#1 and #2 and #3 and #4) or ((#5 or #6) and #3 and #1 and nanosensor*)