IS Skills – Literature Review Exercises – S&E



All Subjects - WEB OF SCIENCE - Citation Indexes and Conference Proceedings

- 1. **Search** for papers about hydrodynamics in relation to wave energy.
- 2. Sort to see which is most cited so far and determine if any have authors at the University of Edinburgh.
- 3. Go back to the all institution results list and refine to review articles. Can you read "Wave energy utilization: A review of the technologies"?
- Use the related articles function for this article.
- 5. Mark and put into a session folder some of the references using Add to Marked List



- 6. What Impact Factor would Martins-Rivas and Mei Chiang quote for "Wave power extraction from an oscillating water column at the tip of a breakwater?"
- 7. Find papers about grid computing's use in climate modelling.
- Save some of these to your marked list and choose some from the marked list to export/email etc.
- 9. Use "cited reference search" in Web of Science to see if any articles have made reference to:
 - Bernholdt D et al (2005) The Earth System Grid: Supporting the next generation of climate modeling research, Proceedings of the IEEE, 93(3), 485-495.
- 10. Use a citation report to get an idea of lan Foster's **h-index**.
- 11. Edit the Search History as required and save this search for future use. The login details you set up for WoK space will get you into EndNote Online

Agriculture and Environment - cab abstracts

- 1. Choose to "Map Terms to Subject Headings" and search for climate change. Click on the underlined term. Look at the scope note (click on "i") to see when the subject term "climate change" is added to a record to describe the article.
- Do you think articles described by CAB Abstracts with the "Narrower Term" global warming will be useful? Select it if so and **choose "Continue>>"** (note combine selections options). Selecting "Explode" finds records with a subject term and all its narrower terms.
- Select Additional Limits. Are any of the papers in the results you've got written in Ukranian?
- Add a result to "My Projects" to save for future reference.
- Search for papers that mention the medical uses of the Neem tree. Think about your search terms and alternatives. Untick the "Map Terms to Subject Headings" if you want records which have your words in the titles, abstract etc and not just the subject heading field.
- 6. Open the full record of a result that looks useful to see how CAB Abstracts describes it. Select a term to execute a new search
- 7. Click to open the Search History and combine searches in the best way for relevant results.
- **Select some records and export** to reference management software.
- 9. Edit the Search History as you wish and Save the search as an AutoAlert
- 10. Change resource [databases] to MEDLINE and choose to re-run the searches done in CAB Abstracts. Using your own keywords does the same search across OVID databases. Different databases add different controlled descriptive terms to their content and are database specific.
- 11. Go to Help and Advanced Search Techniques to decide what proximity indicators and truncation symbols could be useful, eg try search neem ADJ10 medicin*

Biological Sciences - BIOSIS PREVIEWS

- 1. Search for papers that mention the hedgehog gene in humans. **Look at the full record** and the controlled terms in the Major Concepts and Data fields.
- 2. Click on Hominidae in Super Taxa to execute a new search.
- Use Search History to find records common to the last two searches.
- Use Refine Results to find the literature reviews in the results [Literature Types of Document Types].
- 5. Sort by Times Cited and choose the most cited paper. Follow up the citing papers.
- Edit the Search History as you wish. Save the search and create an Auto Alert.
- Search for papers about malaria in Borneo. Exclude those which mention malaria in orangutans.
 Consider other terms for orang-utan(s) or see 2. above. Look at Advanced Search for making use of fields not in the drop down, eg Geographic Data and Disease Data. Also, for use of NOT.
- Save some records to the marked list † and choose some from there to export/email etc.
- Use proximity indicator for papers about mangrove conservation. Rfine/Narrow to Australia. * is the truncation symbol.
- 10. Compare results in BIOSIS and All Databases for a search about ecotourism in China.

Chemistry- scifinder scholar (need to register – use @sms.ed.ac.uk)

- 1. **Search/Explore** for groundwater contamination as a result of fracking.
- Remove duplicates (MEDLINE records) from sensible results sets and refine to review articles.
- 3. Return to the non-review set of results using the breadcrumb trail and sort so the most cited is at the top.
- 4. Can you **read** Marcus & Bond's "Results of the reactant sand-fracking pilot test and implications for the in situ remediation of chlorinated VOCs and metals in deep and fractured bedrock aquifers"?
- 5. Select more than one record and use the Get Related to see articles which have cited your selections.
- 6. Have a look at a record and see if any of the Concepts are useful.
- 7. For SciFinder's Search history type functions save some records and look in Saved Answer Sets.
- 8. Select some records and Export for reference management software.
- 9. Find patents which contain reference to germanium in the production of tunnel diodes
- 10. Go to New Task to **Explore by Substance or Reaction**. Investigate the menus to the left of the drawing board and play with the options.
- 11. Compare with Reaxys.

Engineering & Physics - COMPENDEX & INSPEC (both on EiVillage)

- 1. **Find papers with an experimental focus** (open ADVANCED OPTIONS and look in LIMIT TO options) on **fractured caprock** (use Help to find proximity indicators).
- 2. Look at the Refine Results options and use it to see the papers dealing with CO2.
- 3. Look at a detailed record to see how Compendex (with its Controlled terms) describes one of the articles.
- 4. Use Thesaurus Search to find relevant controlled terms for gaseous flow.
- 5. Use Thesaurus Search to find articles on carbon dioxide.
 - N.B. You'll have seen you could select the Thesaurus of either database. Using Thesaurus to search controlled vocabulary fields limits your results to be from that database.
- Use Search History to combine the previous two searches. Search histories can help you see your "weak link".

- 7. Choose some records.
 - Save to folder (register for personal space) to retain beyond your current session. Deselect "Clear selected records on new search" to retain results from different searches this session.
- 8. **In Search check to see both databases are selected** and use your own search terms with the database tools which best fit your need.
- 9. De-duplicate your results.
- 10. Use one of the "Cited by in Scopus" links.

 Compare with Web of Science, Cited Reference Search, if the article is of particular importance.
- 11. Use Search History to request email alerts of results matching one of your searches.
- 12. **Go to Search and choose just one database** (Inspec or Compendex) and see what differences there are to the choices on offer.

Select "Databases" for descriptions of the databases.

- 13. **Do a search or view the results from a previous search** (by clicking on the number of results of a search in Search History).
- 14. From the top menu choose "**Selected records**" and download references to reference management software. Settings for references "save to folder" plus changing alerts and saved searches etc.

Maths - mathscinet - no abstracts but short reviews of papers.

- 1. Find papers on index theorem and geometry.
- 2. Use Free Tools to browse the subject headings in Algebraic geometry. Retrieve those on Formal neighbourhoods. [MathSciNet is a USA product].
- 3. Look at the full record of some and add to your Clipboard.
- 4. Look at the author profile for Michael Atiyah using Authors tab.
- 5. In the Citations tab, use Search by Subject to find highly cited papers on on-Newtonian fluids [see 2 for getting the code you need]
- 6. Try your own searches from the terms you came up with earlier
- 7. Add some records to your Clipboard.
- 8. **Go to Clipboard, choose the format you need and SaveClip** to get the records into a format (eg BibTeX or AMS Style file) you can save and use elsewhere (eg EndNote).
- 9. Have a look at ZentralblattMATH
- 10. Where can you access Datastream Advance?