Activity Workbook
Finding Research Information for Computer Science DPhil Students

This activity workbook will give you the opportunity to try out some tools for finding information, setting up alerts and saving your references. For most questions, you’ll need to use the Computer Science Library Guide: http://ox.libguides.com/computer_science. A copy of this workbook is available on the library guide, training tab, if you would prefer to work with a hyperlinked document.

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1. Starting your research on a specific topic

Let’s consider this broad research topic: **Cyber attacks on IoT devices**

Search for articles and conference papers using Scopus

When you start researching a topic it is useful to plan your search strategy. Results may change significantly according to keywords, search criteria and filters that you use.

1. **Identify the main keywords** for your database search. Think about the main concept or ‘facets’ of your topic and choose a keyword for each of them. Specify keywords in different fields and link them with Boolean operators:

   - **AND** – to retrieve documents indexed with **all** your keywords
   - **OR** – to retrieve documents indexed by **at least one** of your keywords
   - **AND NOT** – to **exclude** documents indexed by the keyword following this operator

   For our example let’s start with basic keywords such as:

   **Keyword 1:** “Cyber attack*”
   **Keyword 2:** IoT

2. Today we’ll look for papers in Scopus. You can try the same strategies in other databases (such as Web of Science) that you find on the Computer Science Libguide, under the Databases tab.

3. Go to **SOLO** ([http://solo.bodleian.ox.ac.uk](http://solo.bodleian.ox.ac.uk)) and search **Scopus**. It will be the top record in your result list. Click **Online Access**.

4. Input each keyword in a different search box and link them through the **AND** operator.

5. Leave the ‘Article title, Abstract, Keywords’ selected for now.

   Enclosing two words in **quote marks** makes sure they get searched together as an exact phrase. The * symbol is a wildcard character, it retrieves all variations after the “attack” stem such as attacks, attackers and so on.

   You can find more information on wildcards and other operators in the ‘Document search tips’ section on the Scopus Help page.

   How many results do you get? …………………………….

6. Now try to use ‘Keywords’ instead than ‘Article title, Abstract, Keywords’.

   How many results do you get? ……………………………

   Could you say why this changes so much?
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7. Select ‘Cited by (highest)’ from the ‘Sort on’ dropdown menu at the right of the page to see the most popular items on this topic.

8. Click on the first result and look at the indexed keywords. These are keywords assigned to each article by subject specialists or by the author. Can you find any keyword you might use as synonym? In order to broaden up your search try to link your synonyms by the OR operator in the same search box. For instance, you could use:

```
“cyber attack*” OR “computer crime”
AND
IoT OR “internet of things”
```

How many results do you get? ............

9. Filter your results to conference papers (from the filters on the left-hand side, Document Type menu) in the Computer Science subject area, published from 2016 onward.

10. Click ‘Analyze search results’ on top of the results list to analyse statistics related to your search topic. You can find here useful information for your future searches.

You can play around with keywords and filters as much as you like. I’d suggest you explore some of the available features. You could for instance search for:

- papers written by a specific author (combine your keywords fields with an author field)
- papers from Oxford authors (combine your keywords fields with an affiliation field)

Accessing papers
Scopus and Web of Science are bibliographic databases. This means that bibliographic references are indexed, however the full-text content of a paper is accessible only if we have the subscription to the journal where it has been published.

Try to access an article following the Find it@ Oxford link. Can you access it? If yes, great! If not, there are two more ways you can try:

1. **Check on SOLO if we have the print version**: Follow our SOLO instructions on finding journals on SOLO

2. **If we don’t have it, you can request the article through our Interlibrary Loan service.** It costs £5 per article/book, you pay using your PCAS account. You can place a request by filling the online form [https://solo.bodleian.ox.ac.uk/interlib](https://solo.bodleian.ox.ac.uk/interlib)
Search for conferences proceedings on IEEE Xplore and ACM Digital Library

We have seen how to find conference papers. Let’s see now where you can browse conference proceedings on computer science topics.

1. Go to SOLO (http://solo.bodleian.ox.ac.uk) and search IEEE Xplore. You need the Database record. Click Online Access.
2. Select Conferences from the Browse drop down menu.
3. Try searching “information security” (in quote marks) in the small search box to find conferences proceedings with these keywords in the title.
4. Click on the title you are interested in and select one year to access papers from that conference.

3. Now open ACM Digital Library from SOLO or from the Computer Science Libguide.
4. Click on Conference Listing under Browse the Conferences. Conferences are organised by title in alphabetical order. Select the conference ‘CCS Computer and Communications Security’ from the list by clicking on its title and then on the Publication Archive tab. You can see listed here also papers from workshops co-located with the CCS conference. Select a specific year of the conference and then click on Table of contents to access its papers.
5. Go back to the ACM Digital Library home page. Have a look at upcoming conferences by clicking on Recent and Upcoming Conferences under Browse the Conferences.

You can use IEEE Xplore and ACM Digital Library to find papers on your research topic, as we have seen with Scopus.

2. Saved searches and alerts

Databases allow you to save your search keywords so you can run it again in one click. You can also set up an alert for it and receive an email anytime a paper matching your search gets added to the database.

Saving a search and setting an Alert using Scopus

1. Register for a free account by clicking on Register in the top right corner.
2. Log into Scopus.
3. Run a query and filter your results as you prefer. When you are happy with them:
   - Click on Set alert (on the bell icon)  Set alert to set up an email alert for this search. You will be emailed every time there is a new item added to Scopus that matches your search.
   - Click on the Save icon  Save to save your search and filtering criteria.

3. Search for Papers using arXiv and DBLP

1. Go to ArXiv (http://arxiv.org/). Click Advanced Search under the search box at the top right corner of the page. You can use the same example of the Scopus search. Select All fields from the drop-down menu defaulted to Title. Click on the plus icon to add search boxes. Select Computer Science as Subject for your results.
2. You can also use the Simple Search by clicking the link on the right hand side of the page. Both the Simple and Advanced search pages have good tips for search operators.
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3. Click on Help (top right) on To Subscribe to E-Mail Listings, under User Accounts, to learn more about how to sign up for alerts. Try subscribing for an alert in your subject area.

4. Go to DBLP (https://dblp.uni-trier.de). Select ‘combined dblp search’ from the drop down menu next to the search box.

5. Try some searches on a topic you are interested in. Boolean operators look different here. Use | for the OR operator, a space for the AND operator. Our example would then be:

   cyber attack IoT | internet of things

6. Click the browse link at the top right corner of the page. Select Conferences from the drop-down menu. Pick a conference from the A to Z list (for example: ICDE). You will be brought to the conference page, listing multiple years of a conference. Clicking on the view icon and then on table of contents in dblp will get you a list of papers from that conference.

4. Searching for Standards
What if you need standards? We subscribe to the British Standards Online platform. To look for a standard on the BSOL platform:

   1. Go to SOLO (http://solo.bodleian.ox.ac.uk) and search British Standards Online. Click Online Access.
   2. Try searching for the standard on QR codes “BS ISO/IEC 18004:2015”. You can search by standard number, or using keywords from the title.
   3. Click on the standard title for more information or click on the .pdf icon to access the full text.

Please note that you’ll need the VPN in order to access BSOL when connected to eduroam or to wifi connections other than the Bodleian Libraries’ wifi. Please find instructions on how to install the VPN here: https://help.it.ox.ac.uk/network/vpn/index . You won’t need the VPN if you are using computers in the Bodleian Libraries, in the Department, or if you are connected to the Bodleian Libraries wifi.

Alternatively, you can look at IEEE standards. They are American standards published by IEEE.

   1. Open IEEE Xplore. Select Standards from the Browse drop down menu.
   2. Run a search by typing title keywords in the small search box. For example try searching “wireless security”.
   3. Click on Active on the left, and then click on ‘Apply Refinements’ to view only active standards. Choose one of your results, and then click on Show Version Details.
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4. Find the latest approved version and click on its title. Click on the button Full Text as PDF to access the full-text for this standard.

5. Searching for Dissertations and Theses

You can find Oxford print and electronic theses in SOLO http://solo.bodleian.ox.ac.uk or, only for theses in electronic format, in ORA the Oxford Research Archive: https://ora.ox.ac.uk/

If you are looking for non-Oxford theses and dissertations search EThOS, DART-Europe, and Proquest Dissertations and Theses. You can get links to these databases from the library guide, Dissertations, theses & exams tab.

Try searching for “position control”.

1. Search EThOS for UK theses. You’ll need to register to access its contents. Try using the Advanced Search (top menu).
2. Search DART – Europe for European theses. You can search this reference portal by keywords or Browse theses by universities, collections (mainly repositories), countries, and year.
3. Search Proquest Dissertations and Theses Global for theses from around the world. This database contains North American material. In North America, master’s students write theses and PhD students write dissertations.

6. Saving references into a Reference Management Software

After your search, how can you save references for your articles, so to keep them organised, being able to annotate and share them with your colleagues? Reference Management Softwares can help you with this. Today we’ll try using Mendeley.

You will find information on how to use specific reference management software on the http://ox.libguides.com/reference-management . Once on the Reference Management Software libguide, click on the Comparison Tables tab to see different features of each software and choose the one that best suits your needs.

Setting up Mendeley

1. First time you use Mendeley you’ll need to create an account. This gives you 2 GB of online storage space which you can use to sync your references between multiple computers.
2. Go to https://www.mendeley.com/ and click on ‘Create Account’ button. Mendeley is already installed on these computers, so you can skip the installation process.
3. Open Mendeley desktop. Login with your new account the first time you use it.

Please note: The following plugins are already installed on these computers, but please install them when using Mendeley on your own computer/laptop. Use the Tools menu to:

   a. Install MS Word Plugin – This will add additional controls in Microsoft Word which allow insertion of citation and bibliographies
   b. Install Web Importer – This will install a new bookmark in your default web browser which allows you to use Mendeley to take reference information from databases and websites
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Saving references from Scopus
1. **Login to your new Mendeley account online** at [http://www.mendeley.com](http://www.mendeley.com) (skip this step if you’re already logged in).
2. **Now open Scopus.** Run a search and select the results you want to save from your results list.
3. **Click on Export.**
4. **Select Mendeley as exporting method and click on Export.**
5. Your references will be saved in your Mendeley Web Library, but will not be automatically downloaded in your Mendeley Desktop library. Please click the sync button on the Mendeley Desktop toolbar to update your library.

If you are using a database that doesn’t have a direct export to Mendeley, choose to export your references in RIS Format or BibTex format.

Importing files into Mendeley
1. Save some references in .ris or .bib file format. Start the Mendeley desktop application and click on the Add button. In the file browser window that opens, find and select the file you just created.
2. **Click the open button.** The reference(s) in your file will be added to your library.

Organising your references in folders
1. If you want to create a folder and save some of your references in it, open Mendeley Desktop and select Create Folder from the My Library menu on the left-hand side. Name your new folder, press the Enter key.
2. **Click on All Documents.** Select the references you want to copy and drag and drop them into your destination folder.

Inserting citations and bibliography references into a Word document
1. Open up MS Word and create a new document.
2. Type a few words and position your cursor where you wish to insert the citation. Select the References toolbar in MS Word. You will see a set of buttons labelled **Mendeley Cite-O-Matic.** Click the Insert Citation button.
3. A pop-up window will open. Click ‘Go to Mendeley’ to open the Desktop application and select the reference to cite. Click the **Cite** button in Mendeley Desktop to insert the citation into your document. Alternatively from the Insert Citation pop-up window, you can search your reference by title, author or year and click OK.
4. Now add a couple more references to your document. Place your cursor at the bottom of your MS Word document. Click the **Insert Bibliography** button in the Mendeley Cite-O-Matic. You can change the citation style using the Style drop-down menu.

Inserting in-text citations into a Latex document
Mendeley can automatically generate \cite commands for each reference to paste into your LaTeX document.

1. Open the Mendeley desktop program. Open a new script in the Latex editor.
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2. Right click on the reference you want to cite and choose ‘Copy As-LaTeX Citation Command’ option from the pop-up menu.
3. In your LaTeX script position the cursor where you wish to insert the citation. Use the paste option to add the \cite command to your document.

Exporting references to a BibTeX file for your Latex documents.

1. Open the Mendeley desktop program.
2. Highlight the references you wish to export and right click over the highlighted items. From the pop-up menu that appears select the ‘Export’ option.
3. Save the file in .bib format.

If you want to do more with Mendeley or other reference management software I recommend you giving it a try at home or signing up for a Referencing training session available within the Bodleian iSkills program (http://libguides.bodleian.ox.ac.uk/workshops/workshopsbydate)

Useful Libguides and web sites

All subjects Libguides menu: http://ox.libguides.com/home/subjects
VR libguide: https://libguides.bodleian.ox.ac.uk/vr
3D Printing Libguide: https://libguides.bodleian.ox.ac.uk/3dprintingscanning

Open Access at Oxford: http://openaccess.ox.ac.uk/
Research Data Management: http://researchdata.ox.ac.uk/