Key databases and sources for finding relevant references for your MSc Applied Mathematics dissertation

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http://www.imperial.ac.uk/library/subjectsandsupport/maths

Today’s session will cover

Library search tools
Accessing e-resources
How to search three key databases:
  - MathSciNet
  - Inspec
  - Scopus
  - Web of Science
Awareness of related databases:
  - Zentralblatt MATH
Google vs Google Scholar
Plagiarism and referencing

Library search tools: Library website

Library search
  - Find books & more
  - Find articles & more

Mathematics subject web page
  - Find maths e-journals search
  - Databases
    - MathSciNet, Scopus, Web of Science

Library Search...Books & more
Document Delivery

If we don’t have access to a research paper you need, it is possible to request this via our Document Delivery service

Steps involved
- Register (and wait for acknowledgement of registration)
- Request paper via Library Search

Secure Electronic Delivery (SED)
Emailed direct to your desktop

http://www3.imperial.ac.uk/library/documentdelivery

Databases of scholarly research literature

Index specific content and identify exactly what they do index
‘added value’ such as abstracts, reviews, citation searching
Focus on specific or multidisciplinary subject coverage

Accessing e-resources

Access usually based on IP address

Off campus
- Virtual Private Network (VPN)
  - Automatically signed up; set up VPN connection on your machine
  - College username and password
  - Shibboleth, UK Federation

Linking to full text
- SFX

Library Search…Articles & more

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Linking to full text
- SFX
**MathSciNet**: Mathematical reviews on the web

“database of reviews, abstracts and bibliographic information for much of the mathematical sciences literature”

2.8 million items
Published by the American Mathematical Society
Bibliographic data back to the 1800s
Types of research material covered
Journals, conference proceedings, books, US/ European PhD theses (from ProQuest Dissertations & Theses)
Coverage: Approximately 500 journals

**MathSciNet (2)**

Mathematical Reviews database
Signed reviews of the current literature written by mathematicians around the world
Authors uniquely identified by their MR Author ID
Mathematics Subject Classification
Developed by the Mathematical Reviews (MR) and Zentralblatt MATH (Zbl)
Controlled vocabulary
When a researcher writes a paper – they allocate MSC numbers to make it easier for people to find
A paper may fall into one or more subject areas

**Zentralblatt MATH**

Published by FIZ Karlsruhe
Over 3 million items (from more than 3,500 journals) including reviews or abstracts
Content from 1826 onwards including entries from Jahrbuch über die Fortschritte der Mathematik
Journal articles, books, conferences, CD-ROM, DVD, video-tapes, web documents, some theses
We don’t subscribe to this but the first three records in a search are provided for free - useful as an additional source

**Inspec**

Physics, electronics, computing and engineering
Nearly 13 million records
Coverage: approximately 5,000 scientific and technical journals and 2,500 conference proceedings as well as books, reports and dissertations
Published by the Institution of Engineering and Technology
**Cited reference searching**

Enables you to track related research literature forward in time as well as back in time based on key references

Start with a key paper and identify not only previous papers cited by the paper, but identify future papers that have cited it

Scopus and Web of Science both offer this feature

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**Web of Science Core Collection**

Sciences, social sciences, arts and humanities (256 individual disciplines)

46 million records dating back to 1900

Published by Thomson Reuters

Coverage: over 12,000 journal titles and 150,000 conference proceedings

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**Scopus**

Life Sciences, Health Sciences, Physical Sciences, Social Sciences, Arts and Humanities

50 million records

- 29 million going back to 1996
- 21 million going back to 1823

Published by Elsevier

Coverage includes over 19,500 journal titles and 5.3 million conference proceedings - journals, conference proceedings, books, trade publications, scientific web pages and patent records

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**Google**

Images, tables, reports, websites, some scholarly literature

What is being searched?

How are results ranked?

How up to date are results?

Search tips

- ext: Filetype e.g. "carbon emissions" ext:pdf
- site: Site search e.g. methane site:.gov.uk
- intitle: Searches only title e.g. intitle:"greenhouse gases"

See http://www.rba.co.uk/search/SelectedGoogleCommands.shtml
searches for scholarly literature
useful for reports and open access material
Library links ‘SFX@Imperial’

What is being searched?
How are results ranked?
How up to date are results?

2.5 Plagiarism

“The work contained in this thesis is my own work unless otherwise stated.”

“The College and Department are against all forms of plagiarism. While discussing among fellow students and consulting relevant literature and internet resources to gain genuine understanding are encouraged as part of your learning process, producing coursework identical, or nearly identical, to others, or using materials from published literature and/or web sites without proper acknowledgement will be viewed as plagiarism and will be investigated. Once an act of plagiarism is established, all students involved will be penalised, which may include marks for coursework or project being zeroed and/or disciplinary actions by the Department and the College. Records of plagiarism and penalty imposed may be kept in the student records.”

From: https://workspace.imperial.ac.uk/mathematics/Public/students/Course%20Guides/AppliedMSc2013-14.pdf

Plagiarism: a definition

Plagiarism is: when you copy or use someone else’s work or ideas in your essay, coursework, thesis, etc and then do not acknowledge that you have done this.

How do you avoid plagiarism?

1. Plan the time you need to research, write and review your work
2. Take good notes, including details of sources and page numbers (when appropriate)
3. Practice your writing:
   - write in your own words;
   - paraphrase other people’s words; and
   - don’t rely on quotations
4. Cite and reference the sources you use in your work
Further information on avoiding plagiarism

Guidance from the Library
http://www3.imperial.ac.uk/library/subjectsandsupport/plagiarism/pgtaught

Imperial Study Guide for Master’s Students
http://www3.imperial.ac.uk/students/studyguide

College Plagiarism and Examination Offences Policy and Procedures

Referencing is...

Not just including a reference list at the end of your project but about acknowledging within the text of the project if you have taken an idea OR exact wording from a source

This acknowledgement within the text of your project is known as a citation

You need to cite the use of someone else’s ideas or exact words (known as a quotation)

Choose one style and use it consistently
Harvard and Vancouver guides both available on the Library website
http://www3.imperial.ac.uk/library/subjectsandsupport/referencemanagement

Questions?

Mathematics Learning Centre
- Tuesdays 11.00 - 13.00
- Thursdays 13.00 - 15.00

Ask for me at the Central Library information hub
- Based on Level 1 - Room 110

Email, phone
- j.evans@imperial.ac.uk
- phone ext 45736 or 0207 594 5736

What is RefWorks?

Reference management software package
Enables you to save and organise your references
Web based – available wherever you are
Export in BibTeX format
http://www3.imperial.ac.uk/library/subjectsandsupport/referencemanagement/refworks

JabRef is a free alternative that works with LaTeX
http://jabref.sourceforge.net/

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INSPEC TIP SHEET

1. Start at Maths subject page: http://www3.imperial.ac.uk/library/subjectsandsupport/maths
2. Click on Inspec link
3. Uncheck Compendex and Referex (as we wish to search the Inspec database only)
4. Make sure the Quick Search tab is selected

SEARCH TIPS

1. **Boolean operators** enable you to narrow or widen the search.
   - Combine terms with OR to broaden scope of search
     e.g. quantum OR plasmonics returns results containing either term.
   - Combine terms with AND to narrow scope of search
     e.g. quantum AND plasmonics returns results containing both terms.
   - Combine terms with NOT to eliminate terms from results
     e.g. quantum NOT plasmonics will return results that do not contain plasmonics.

2. **Phrase searching**
   Use quotation marks to search for your search terms as a phrase within the results e.g. “quantum plasmonics” will find results for this phrase whereas quantum plasmonics will find results with these terms anywhere in the results.

3. **Truncation ***
   Enables you to search for all words that start with the same letters as the truncated term (e.g. cosmolog* picks up cosmology, cosmological, cosmologies).

4. **Wildcards ?**
   Replace a single character (e.g. to retrieve results with both characterisation and characterization).

5. **Autostemming**
   Terms are automatically stemmed e.g. interact searches for interaction, interactive.

6. Indexers classify a paper by adding terms from a controlled vocabulary list to the index record.
   - **Thesaurus search** enables you to search the Inspec Thesaurus which is a guide to the controlled vocabulary added by the indexer. Good way to find alternative terms for your search.
   - **Inspec classification codes** are assigned by indexers to indicate the field the paper belongs in. e.g. A7865E Optical properties of metals and metallic alloys (thin films/low-dimensional structures).

FIND THE FULL TEXT by clicking on SFX and following the link. If we do not have online access try Library Search...books and more to find print holdings.

PRINT AND EMAIL YOUR RESULTS by ticking the boxes on the left of each relevant article. Then select format and output before choosing email, print or download.

TUTORIALS can be found at: http://www.imperial.ac.uk/library/dynamic/compendex/index.htm and http://ei.org/trainingpresentations.
1. Start at Maths Subject page:
   http://www3.imperial.ac.uk/library/subjectsandsupport/maths

2. Click on MathSciNet.

**PUBLICATIONS SEARCH TAB**

Default search option and searches the entire Mathematical Reviews database.

**AUTHORS SEARCH TAB**

This option searches the associated author database created by Mathematical Reviews (MR) staff.
- Search should be entered in the form **last name, first name, middle name(s) / initial(s)**. Commas need to be used to separate first and last names
- Wildcard (*) can be used.

**JOURNALS SEARCH TAB**

This option searches the MR journal database.
- Can search by keywords or journal abbreviation.

**CITATIONS SEARCH TAB**

Search for citations for an author, a journal, a subject or a year.

**PRINT AND EMAIL YOUR RESULTS (VIA THE CLIPBOARD)**

1. From your results list add relevant citations to the Clipboard by checking the box next to the reference and selecting Clipboard.

2. Go to the Clipboard by selecting the **Clipboard** option that has appeared on the menu at the top of the screen.

3. To email results, go to your web browser’s file menu and select **Email Link**.

4. To save results, select **Save Clip** (making sure the appropriate format is selected – ASCII, BibTeX, AMSRefs or EndNote) then go to the **File** menu in your browser and select **Save As**. To export in BibTeX or EndNote formats save as a text file.

**MATHSCINET TUTORIALS** can be found at: http://www.ams.org/mathscinet-info/
SCOPUS TIP SHEET

1. Start at Maths subject page:  
   http://www3.imperial.ac.uk/library/subjectsandsupport/maths
2. Click on Scopus.
3. Make sure the Document Search tab is selected.

**Scopus**

**Search** | **Sources** | **Analytics** | **Alerts** | **My list** | **Settings**
---|---|---|---|---|---

**Document search**  

**Search for:**  
E.g. "heart attack" and stress

**Limit to:**  
- Date Range (inclusive)  
- Document Type
- Subject Areas

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<th>E.g.</th>
<th>Add search field</th>
<th>Search</th>
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FIND THE FULL TEXT by clicking on SFX and following the link. If we do not have online access try Library Search...books and more to find print holdings.

PRINT AND EMAIL YOUR RESULTS by ticking the boxes on the left of each relevant article. Then select format and output before choosing email, print or download.

**TUTORIALS** can be found at: http://help.scopus.com/Content/tutorials/sc_menu.html

**Cited Reference Searching**

Cited reference searching enables you to search for journal papers (or other published works) that have cited a previously published paper that are included in the Scopus database. This means you can follow an idea back in time to previous research (via Cited References), and you can follow it forward in time (via Cited by) to find subsequent relevant research.

1. Search the Scopus database for papers
2. Identify the paper you wish to check references for  
   e.g. Conditional and marginal models: Another view by Lee, Y. & Nelder, J.A.
3. Click Cited by in Scopus
4. You will then have a list of papers in the Scopus database that have cited your original reference since 1996.

**SEARCH TIPS**

To search for a phrase, enclose terms in "double quotation marks" or for an exact phrase search use {}

* wildcard can be used for any group of characters

? wildcard can be used for any single character

Scopus automatically searches for variant spellings

**ACCESS**

**On campus**
IP address controlled

**Off campus**
College username & password

**SEARCH TIPS**

To search for a phrase, enclose terms in “double quotation marks” or for an exact phrase search use {}  

* wildcards can be used for any group of characters  

? wildcards can be used for any single character  

Scopus automatically searches for variant spellings

**Cited by 45 documents since 1996**

<table>
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<th>Cited by 45 documents since 1996</th>
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| Impact of enterococcal colonization and infection in solid organ transplantation recipients from the Swiss Transplant Cohort Study  
  Buchel, E. , Kralidis, G. , Boggian, K.  
  (2014) Transplant Infectious Disease  
| Dependence in binary outcomes: A quadratic exponential model approach  
  Srdare, M.Z. , Islam, M.A. , Awang, N.  
  (2014) Bulletin of the Malaysian Mathematical Sciences Society  
| Identification of confounding versus dispersing covariates by confounding influence  
  Wang, X. , Yin, L.  
| View all 45 citing documents |
WEB OF SCIENCE TIP SHEET

1. Start at Mathematics subject page: http://www3.imperial.ac.uk/library/subjectsandsupport/maths
2. Click on Web of Science (including Web of Science Core Collection)
3. Click on arrow next to All Databases and select Web of Science Core Collection.

FIND THE FULL TEXT by clicking on Full Text, selecting SFX and following the link. If we do not have online access try Library Search...books and more to find print holdings.

PRINT AND EMAIL YOUR RESULTS by ticking the boxes on the left of each relevant article. Then select format and output before choosing email, print or download.


Cited Reference searching
Citation searching enables you to search for journal papers (or other published works) that have cited a previously published paper. This means you can follow an idea back in time to previous research (via Cited References), and you can follow it forward in time (via Times Cited) to find subsequent relevant research.

1. Cited Reference Search Step 1: Click on the Cited Reference Search option, enter original reference details and click on Search.
2. Cited Reference Step 2: Select appropriate reference by ticking the box to the left. If you wish to view the index record for this paper click on View Record. Then Click on Finish Search.
3. You will then have a list of papers that have cited your original reference.