Library Workshop for
ENGG/IDPO 6770 (PDEV 6770B/E)
27 September 5:30-7:00pm
4 October 12:30-2:00pm

Scan HKUST card barcode to take attendance

Eunice Wong
Engineering Librarian
lbeunice@ust.hk
Learning Outcomes

In this session you will learn how to:

+ Search for literature using Google Scholar and engineering databases effectively
+ Locate high impact journals and papers
+ Stay current with the latest research using citation/search alerts
Survey on Research Habits

+ Please fill in the online survey: [https://tinyurl.com/6770-181005](https://tinyurl.com/6770-181005)
+ Where do you go (or which search tools do you use) to find information
+ How do you keep records and organize references (documents you have read and will use in writing your paper or thesis)
+ How do you keep track of your own publications and citations received?
Where do you go to find papers?

Click for Advanced Search

- My profile
- My library
- Alerts
- Metrics

Google Scholar

Articles  Case law

Stand on the shoulders of giants
Google Scholar Advanced Search

Find articles
with all of the words
with the exact phrase
with at least one of the words
without the words
where my words occur

Return articles authored by

Return articles published in

Return articles dated between
Google Scholar Exercise

+ Search for **photoplethysmography**, from the search result try to find out

1. Most highly cited document (how many times it was cited?)
2. Most prolific authors (written a lot on this topic/area)?
3. Most prolific universities/research institutions?
4. Top 5 journals?
5. How to limit the results to journal article only
6. The publication and/or citation trend?
Set Library link to access full-text from off-campus via EZproxy authentication

1. Choose 'Library links' in the settings.
2. Search for your library, e.g., 'hong kong university of science and technology'.
3. Select the options for your library: 'The Hong Kong University of Science and Technology - Find@HKUST Library' and 'Open WorldCat - Library Search'.
4. Save the changes.
Import References Directly to RefWorks/Endnote
Google Scholar - Questions

+ **Coverage**
  - What is included in Google Scholar?
  - Publishers (CAS, Elsevier, IEEE..) & Journals??
  - How complete is the coverage?

+ Different versions of the same paper
  - Inflated citation numbers?
  - Which version should I cite?

+ Document types
  - Can't limit to journal article, conference paper or review article

+ Full-text availability
  - Full-text access often requires subscription
  - On-campus (IP address)
  - Off-campus (turn on Find@HKUST)
Library E-Resources

1. **E-books**
2. **E-journals**: browse by titles, subjects or call numbers
   - Search Library Catalog to find different formats (print, electronic, microform)
   - If back issues are only available in print or microforms: **Document delivery service**
3. **HKUST Electronic Theses**
4. **Databases**: alphabetical or by subject

Remote (off-campus) access to Library databases, e-books and e-journals requires ITSC username & password for authentication
## What do Databases Cover?

| Journal Articles & Conference Papers | ACM Portal  
|                                     | ASCE Research Library  
|                                     | IEEE Xplore  
|                                     | **Scopus**  
|                                     | **Web of Science**  
| E-Books ([guide](#))                | Books24x7  
|                                     | Knovel (engineering handbooks)  
| Patents                              | Patsnap  
| Standards                            | ASTM Standards ([2013 ed. On DVD](#)) ([2017 hard copy](#))  
|                                     | British Standards Online ([10 Modules](#))  
|                                     | IEEE Xplore  
| Theses & Dissertations               | **American doctoral dissertations**  
|                                     | **ProQuest Dissertations & Theses** ([thesis subsidy](#))  
|                                     | **HKUST E-Theses**  
| Statistics                           | OECD iLibrary  
|                                     | Passport  
|                                     | Statista : the portal for statistics
What do Databases Cover?

- Some databases provide the document full-text
- Some only provide **citation** (authors, article title, publication title and vol/iss/page numbers) and **abstract** (article summary)
Web of Science & Scopus

+ Covers major STM journals and conference proceedings
+ Citation analysis:
  − Times cited, citation count, cited n times = 被引用次數
  − **H-index**: An index to quantify an individual's scientific research output (if an author’s h-index=50, at least 50 articles of this author have been cited 50 times or more)
+ With citation analysis, one can
  − Locate high impact (most highly cited) journals and articles in a subject area
  − Discover related articles that cite the same source
  − Trace the development of a research field or technology (backward & forward citations)
Web of Science

Our subscription (Web of Science Core Collection):

1. Science Citation Index Expanded 1975-present
2. Social Sciences Citation Index 1975-present
3. Conference Proceedings Citation Index- Science 1990-present
4. Conference Proceedings Citation Index- Social Science & Humanities 1990-present

Content coverage: Master journal lists
Applicable to **many engineering databases**

- Case insensitive: AIDS = aids
- System on chip = system **and** chip
- "system on chip" = exact phrase
- Refine/focus your search: organic light emitting diode(s)
  - What materials?
    - What aspect? Efficiency?
- Variants of the same root
  - encrypt*: encrypt, encrypted, encryption, etc.
- Search more thoroughly: include synonyms, acronyms
  - (3d or "3 d" or "3 dimensional" or "three dimensional")
  - ("radio frequency identification" or rfid)
WoS – Search Results

+ Citation Report – Analyze and Identify Research Trends
+ Only available for searches that contain < 10,000 records.
Analyze results:
- Authors
- Subject areas
- Organizations
- Countries
- Funding Agencies
- Publication Years
WoS – Find Full-text

- Semantic Support for Model Based Big Data Analytics as-a-Service (MBDAaaS)
- Iris Recognition Using Multi-Algorithmic Approaches for Cognitive Internet of things (CIoT) Framework

Find@HKUST
- Link to e-versions
- HKUST ILLiad - request interlibrary loans
  http://library.ust.hk/services/borrowing/interlibrary-loan/
Web of Science Exercise

+ Search for **photoplethysmography**

1. Can you find the most highly cited document (how many times it was cited?)

2. Can you limit the results to journal article only

3. Can you identify the research (publication and/or citation) trend?
WoS – Research Impact

+ Search result – date, most current (default)
+ Sort by Times cited (被引用次數) to find high impact papers
+ Trace backward & forward citations
+ Create Citation Alert
  – receive email notice or rss feed when this paper is cited by others
The Paper has cited 6 Sources (appeared in the reference list)

The Paper has been cited by 4 Sources (Times Cited = 4)
Locate High Impact Journals

Find high impact journals to
1. Keep an eye on research trends
2. Submit your manuscript

**Journal Impact Factor**: measure of the frequency with which an "average article" in a journal has been cited in a particular year.
Can’t compare Journal Impact Factor across different subject categories

<table>
<thead>
<tr>
<th>Journal</th>
<th>Impact Factor 2017</th>
<th>Impact Factor 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEJM</td>
<td>79.258</td>
<td>67.512</td>
</tr>
<tr>
<td>IEEE</td>
<td>20.23</td>
<td>20.618</td>
</tr>
<tr>
<td>HB</td>
<td>4.374</td>
<td>4.933</td>
</tr>
</tbody>
</table>

*Data from the 2017 edition of Journal Citation Reports*
Web of Science Exercise

+ Article: **Graph embedding and extensions: A general framework for dimensionality reduction**
+ How many references did it cite?
+ How many times it was cited?
+ Where was it published? What is the impact factor of the journal in 2017?
+ Are there related records (documents that share same references)?
+ Can you read the full-text?
Different databases cover different publications
Web of Science - Alerts

+ Citation Alert
  - Click +Create Citation Alert+
  - Login to your WoS account
  - Default: email alert for 1 year
  - Click "My Tools" to modify settings
  - Click to subscribe to a rss feed

+ Search Alert
  - or
  - Search History -> Save History/Create Alert
  - Give your search a name and "Save"
  - Click to subscribe to a rss feed
Scopus

+ Developed by Elsevier (reputable publisher of science, engineering, technology & medical literature)
+ **Content coverage**
+ Also provide citation analysis
Scopus – Search Results

+ Search result – Date (Newest) by default (can also sort by times cited)
+ Refine results by:
  - Authors
  - Source titles
  - Document type
  - Subject areas
  - Affiliations
  - Countries
+ Full-text
  - View at Publisher
  - Also
Almetrics: article level statistics like mentioned by tweets / facebook / science blog, save to Mendeley
Scopus – Author Profile

Author details

The Scopus Author Identifier assigns a unique number to groups of documents written by the same author via an algorithm that matches authorship based on a certain criteria. If a document cannot be confidently matched with an author identifier, it is grouped separately. In this case, you may see more than one entry for the same author.

Ip, Nancy Y.Y.
Hong Kong University of Science and Technology, Hong Kong, China
Author ID: 7005766760
Other name formats: [Ip, Nancy Y.; Ip, Nancy Yuk Y.; Ip, N.Y.; Ip, N.; Ip, Nancy; Ip, Nancy Y.]

Subject areas:
- Biochemistry, Genetics and Molecular Biology
- Neuroscience
- Medicine
- Pharmacology, Toxicology and Pharmaceutics
- Chemistry
- Agricultural and Biological Sciences
- Multidisciplinary
- Physics and Astronomy
- Engineering
- Materials Science
- Immunology and Microbiology
- Chemical Engineering
- Social Sciences
- Psychology
- Business, Management and Accounting

Document and citation trends:

- 2008: 10 documents
- 2019: 1640 documents
- H-index: 66
- Total citations: 21736 by 16471 documents

Documents by author:
- 272

Cited by:
- 16471 documents
- 150 co-authors

Follow this Author
## Scopus – Affiliation Profile

**Affiliation details - Hong Kong University of Science and Technology**

Clear Water Bay, Hong Kong
China
Affiliation ID: 60008592
Other name formats: [Hong Kong University of Science and Technology](#)

### Documents by subject area

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Count</th>
<th>Collaboration Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>16576</td>
<td>1372</td>
</tr>
<tr>
<td>Computer Science</td>
<td>11538</td>
<td>1338</td>
</tr>
<tr>
<td>Materials Science</td>
<td>8177</td>
<td>1088</td>
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<tr>
<td>Physics and Astronomy</td>
<td>8935</td>
<td>766</td>
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<tr>
<td>Chemistry</td>
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<td>587</td>
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<tr>
<td>Mathematics</td>
<td>5083</td>
<td>504</td>
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<tr>
<td>Biochemistry, Genetics and Molecular Biology</td>
<td>3438</td>
<td>387</td>
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<tr>
<td>Chemical Engineering</td>
<td>2858</td>
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<tr>
<td>Environmental Science</td>
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<td>385</td>
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<tr>
<td>Social Sciences</td>
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<td>85</td>
</tr>
<tr>
<td>Earth and Planetary Sciences</td>
<td>1863</td>
<td>24</td>
</tr>
</tbody>
</table>

### Affiliation hierarchy

- **Engineering**
- **Computer Science**
- **Materials Science**
- **Physics and Astronomy**
- **Chemistry**
- **Mathematics**
- **Biochemistry, Genetics and Molecular Biology**
- **Chemical Engineering**
- **Environmental Science**
- **Social Sciences**
- **Earth and Planetary Sciences**

### Collaborating affiliations

- **Hong Kong University of Science and Technology**
- **University of Science and Technology**

### Documents by source

- **Hong Kong University of Science and Technology**

**Documents, whole institution:** 44,476
**Documents, affiliation only:** 44,462

**Authors:** 10,681
Scopus – Search Syntax

+ Formulas search
  − $KxFe_{2-y}Se_2$

+ Accented and special characters
  − Type: espana will find both españa and espana
Scopus – Search Syntax

+ This also applies to special characters:
  - Scopus finds variant spellings and matches *Greek characters* and their common American/British English variant spellings – enter *alpha* or \( \alpha \) will give the same results
  - Special characters that have common equivalents like \( \pi \) \( \supseteq 2; - \) pr2
  - Special characters with no common equivalents, punctuation, and spacing are ignored.
  - To search specifically for a special character or a punctuation mark, enclose it in braces \{\pi\}
Stay Current with Alerts

+ Many databases offer alert services to help you keep up-to-date with the latest literature in your research areas

1. Journal **table of contents** alert
   × ACM, IEEE, Elsevier (**big data research**), etc.

2. Citation (of a particular article) alert
   × Scopus (also author citation alert), Web of Science

3. Search alert

+ Guide on Current Awareness Services
Organize References

**RefWorks**

- Online tool to organize references & create a consistently formatted bibliography (reference list)
  - Import citations from Library databases & Google Scholar
  - Create folders to organize your citations
  - Compile a bibliography in different styles (ACM, Elsevier, IEEE, Nature, etc.)
- Plugin for MS Word – cite sources while you write
- **RefWorks for LANG 5001/5081 students in October**
Getting Published

+ Resources/Tools for Authors:
  - Elsevier, IEEE, Springer
+ Publishing seminars
+ Tips on Managing Your Publications
  - Use a consistent, unique name
  - Update your publication list regularly
  - Set up unique author IDs helps keep track of times cited by others: Google Scholar Citations, ResearcherID (WoS), ORCID
  - Inform databases of any errors in their records
Help for PGs

  - Interlibrary loan, [HKALL](http://library.ust.hk/help-for/postgraduates/)
  - Access to other university libraries: [JULAC card](http://library.ust.hk/help-for/postgraduates/)

+ [http://libguides.ust.hk/engresearch](http://libguides.ust.hk/engresearch)

+ Further Assistance
  - Information desk (G/F, opposite the stairs)
  - Email: [lbref@ust.hk](mailto:lbref@ust.hk)
  - [WhatsApp: 9701-1055](https://wa.me/97011055)
  - Phone: 2358 6760
Please fill in the online feedback form at
http://library.ust.hk/feedback

Keep Smiling & Ask Eunice
I’m your Engineering Librarian