READING AND WRITING A RESEARCH PAPER

Presented by Thanda Shwe, Professor, Dr.Eng. Department of Computer Engineering and Information Technology

How to find research papers?

Use Academic Search Engine

General search engine like Google, Yahoo and MSN is not very effective

| Academic Search Engine | URL | Disciplines | Help Files |
|--|---|---|--|
| Google Scholar | scholar.google.com | All | scholar.google.com/intl/en/scholar/help.html |
| ScienceDirect | http://www.sciencedirect.com/science/search | All | NA |
| Pubmed | www.ncbi.nlm.nih.gov/pubmed | Life sciences | www.nlm.nih.gov/bsd/disted/pubmedtutorial |
| IEEE Xplore | ieeexplore.ieee.org/Xplore/guesthome.jsp | Electronics, Electrical engineering, Computer science | NA |
| National Agricultural Library (AGRICOLA) | agricola.nal.usda.gov | Agriculture | agricola.nal.usda.gov/help/quicksearch.html |
| Education Resources Information Center (ERIC) | eric.ed.gov | Education | NA |

Ref: Resources for finding and accessing scientific papers, Blog Article @sciencebuddies.org

And...

Follow the most popular conferences or journals in your field

□ For example,









How to get research papers?

Getting research papers

- some search engines provide links to free online versions of the paper, if one exists.
- Some of the universities' libraries are free to the public
- □ Go directly to the online homepage of the journal
- Search directly for the homepage of the first or last author
- Request directly to the authors
- Look for the paper (using the title or authors) in a science database,

Getting research papers (Cont'd)

| Database URL | | Disciplines | | | | |
|--|---|---|--|--|--|--|
| NASA Scientific and Technical Information (STI) | www.sti.nasa.gov/STI-public- homepage.html | Aerospace | | | | |
| SOA/NASA Astrophysics Data System | adswww.harvard.edu/ | Astronomy, physics | | | | |
| arXiv | arxiv.org/ | Physics, Mathematics, Computer science, Quantitative biology, Quantitative finance and statistics | | | | |
| CiteSeer ^X | citeseerx.ist.psu.edu/ | Computer science | | | | |
| Public Library of Science (PLOS) | https://www.plos.org/ | Life sciences | | | | |
| High Wire Press | highwire.stanford.edu/lists/freeart.dtl | Life sciences | | | | |

Ref: Resources for finding and accessing scientific papers , Blog Article @sciencebuddies.org

How to read research paper?

Reading research papers

Written in very condensed style

Language

How to Read and Evaluate Technical Papers

Original Text by Bill Griswold Modified by Gail Murphy (November 18, 1998 and January 6, 2000) Taken from Rob Walker's web page at University Calgary (January 2004) Modified slightly by Jonathan Maletic (January 2004 and Nov. 2013)

Reading research papers effectively is challenging. These papers are often written in a very condensed style because of page limitations and the intended audience, which i assumed to already know the area well. Moreover, the reasons for writing the paper may be different than the reasons the paper has been assigned, meaning you have to we harder to find the content that you are interested. Finally, your time is very limited, so you may not have time to read every word of the paper or read it several times to ext the nuances. For all these reasons, reading a research paper often requires a special approach.

Reading research papers(Cont'd)

- □ Motivations for this work?
- □ What benefits or problems are identified?
- □ What are the contributions?
- □ What is the proposed solution?
- What argument and/or experiment is made to make a case for the value of the ideas?
- □ What is the evaluation of the proposed solution?
- □ What are the future directions for this research? Ref: http://www.cs.kent.edu/~jmaletic/howtoread.html

Enjoy your research and get good results....

Conducting a good research

- □ Finding the problem
 - Come from own experience
 - Literature Review of various related researches
 - Previous research's future work
- □ Analyzing the problem
 - Impact of the problem
 - Possibility of previous research's future work
- □ Finding and Proposing the solution
 - How to contribute

Record all of your research

- Keep one research log book
- Record of all activities from the start of the research until completion
 - What you did
 - List of experiments, list of papers you read
 - What you were thinking
 - Research ideas, changes of ideas

How to publish research paper?



In a conference?

In a journal?

- 11

Computers and

Electrical Engineering



Where? In a conference? Journal?

Each one has its own advantages

| Conference | Journal |
|--|---|
| Networking activity Research Ideas Learn many researches in a short time | Higher reputation Systematic publication |

- Some conferences have higher reputation than general academic journal
 - Very hard to get accepted. Competitive. Acceptance rate is about 10%.
 - In computer science field, IEEE/ACM Joint conferences, IEEE conferences, ACM conferences

Can we publish free?

| Conference | Journal |
|---------------------|-------------------------------------|
| NO! | YES!! |
| Transportation, | Most of the reputable |
| Accommodation, | journals do not collect |
| Registration Fee is | money from the authors |
| required. | unless you want |
| | Open Access(OA) |

• Quick publication

Find the target journal

- Consider to publish in your most read journals
- Journal matching service
 - Elsevier journal finder, Springer Journal suggester, IEEE publication recommender

Finding the target journal(Cont'd)

Find the perfect journal for your article

Elsevier® Journal Finder helps you find journals that could be best suited for publishing your scientific article. Please also consult the journal's Aims and Scope for further guidance. Ultimately, the Editor will decide on how well your article matches the journal. Powered by the Elsevier Fingerprint Engine[™], Elsevier Journal Finder uses smart search technology and field-of-research specific vocabularies to match your article to Elsevier journals.

Simply insert your title and abstract and select the appropriate field-of-research for the best results.

| Paper title | | | | | | | |
|---|--------------------------------|-----------------------------------|----|--|--|--|--|
| Enter your paper title here | | | | | | | |
| Paper abstract | | | | | | | |
| Copy and paste your paper abst | ract here. | | | | | | |
| | | | ii | | | | |
| Fields of research Optional: refine your search by selecting | ng up to three research fields | | | | | | |
| 🔲 Agriculture 🏼 🖻 | Economics @ | Materials Science and Engineering | C | | | | |
| GeoSciences 🖉 | Humanities and Arts 2 | Life and Health Sciences 2 | | | | | |
| Mathematics 2* | Physics 2* | Social Sciences 2 | | | | | |
| Chemistry 🕑 | | | | | | | |

Journal's impact factor

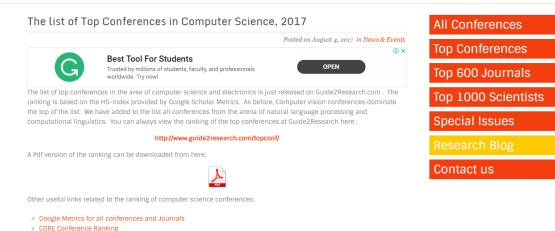
- more than 50,000 scientific journals. nearly a million scientific papers published per year.
- Don't **automatically aim** for the most prestigious journal.
 - Top Science Journals such as nature, science with impact factor around 40
 - A lot of time may be lost by rewriting and resubmitting
 - Find the intermediate one
- Impact factor and indexing services does not directly mean the quality of the journal
- □ Some new journals are good quality but low impact factor
- Consider submission to Special Issues
 - E.g High impact journals- 10% but for the special issues about 40%

Apply the ranking website

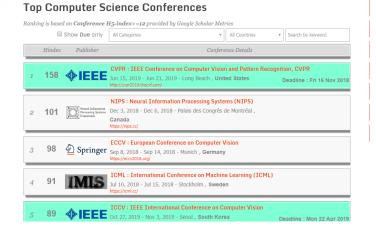
| SJR | २ | Scimago Journal 8 | & Country Ra | nk | | | | | | | | | | Q, |
|-----------|--|--------------------------|--------------|----------------------------|-------------|------------|-----------------------|-------------------------|----------------|-------------------------|---------------------------|--------------------------|----------------|------|
| | | | Home | Journal Rankings | Cou | intry Rar | nkings V | iz Tools | Help | About Us | | | | |
| | Comput | er Science 🗸 🗸 | All subject | categories 🗸 | All re | gions / c | countries | All typ | Des | ~ | 2017 | | ~ | |
| Only Oper | Only Open Access Journals Only SciELO Journals Only WoS Journals ? | | | | | | | | | pply | | | | |
| | | | | | | | | | | | | <u>+</u> (| Download | data |
| | | | | | | | | | | | | 51 - 100 of 1 | 7191 | . > |
| Title | 9 | | | Туре | ↓ SJR | H index | Total Docs. (2017) | Total Docs. (3years) | Total Refs. | Total Cites (3years) | Citable Docs. (3years) | Cites / Doc. (2years) | Ref. / Doc. | |
| 51 | AS-NSF Reg | gional Conference Series | in Applied | conference and proceedings | 2.274 | 2 | 2 | б | 48 | 9 | 3 | 3.00 | 24.00 | |
| 52 SIAM | M Journal (| on Optimization | | journal | 2.195 Q1 | 99 | 105 | 301 | 3935 | 787 | 301 | 2.40 | 37.48 | |

Apply the ranking website (Cont'd)

Guide²**Research**



GuideŽResearch



Check with **beall** list

BEALL'S LIST OF PREDATORY JOURNALS AND PUBLISHERS

 PUBLISHERS
 STANDALONE JOURNALS
 CONTACT
 OTHER
 THINK CHECK SUBMIT

 Q
 Search for publishers (name or URL)
 Image: Contact of the publishers (name or URL)
 Image: Contact of the publishers (name or URL)

Potential predatory scholarly open-access publishers

Instructions: first, find the journal's publisher – it is usually written at the bottom of journal's webpage or in the "About" section. Then simply enter the publisher's name or its URL in the search box above. If the journal does not have a publisher use the Standalone Journals list.

Original list

This is an archived version of the Beall's list – a list of potential predatory publishers created by a librarian Jeffrey Beall. We will only update links and add notes to this list. A list of new predatory publishers is available below the original one.

- 1088 Email Press
- 2425 Publishers
- The 5th Publisher
- ADCI I

Other important lists

List of journals falsely claiming to be indexed by DOAJ

DOAJ: Journals added and removed

JCR Master Journal List

Questionable conferences

How to avoid predatory conferences

Identifying predatory journals

- Unprofessional website with spelling and grammatical errors
- Submission invitation emails with grammatical errors, overly flattering language, and an urgent request for a reply
- An "Impact Factor," but no listing in the Web of Science Journal Citation Report
- Prominent announcement that the publication is indexed in Google Scholar but not in high quality databases such as Web of Science or Scopus
- □ Journal title is very similar to a well-established journal
- Unusual journal scope that is either very broad or combines unrelated fields
- Promise of very fast publication
- □ Lower fees than other journals in the field

Ref: IEEE Author Guide

Who will be harmed by predatory journals?

- Authors
 - Good scientific finding and results may not be acknowledged by the research community
- Academic Hiring and Promotion Committee
 Challenging in competitive hiring situation
- Image of Authors' institution
- Readers

Thus, before submit your journal, take a few minutes to google on that journal

Prepare your manuscript

- Finally check the journal scope
- Prepare your manuscript with author guidelines
 - Make impression with title and abstract
 - Create good storyline
 - Be sure to write simple and clear
 - Well organize

Authorship

- manuscripts with large numbers of authors
 impossible to make a significant contribution to the work
- Only significant contributions to theory, experimental work, data interpretation, or writing, qualify one for authorship.
- Performance of proofreading, editing, etc. should be acknowledged, but does not qualify for authorship.
- Crediting people with authorship, when they made no such contribution, is scientific fraud.

Authoring Tools

- Word
- Latex
- Overleaf(Online Collaborative Latex Editor)
 Many authors can write on the same document at the same time

English for writing research papers

Adrian Wallwork

for Writing

Research Papers

ENGLISH

2 Springer

 Sections of a paper
 Title, Abstract, Introduction, Literature Review, Methods, Results, Discussion, Conclusion
 How to highlight our findings
 How to write clearly

English for Presentations at International Conferences

Second Edition

Back up while writing

- Good data management and file handling prevents disaster.
- each day, duplicate previous version and change date on new copy
- back up files constantly- (DropBox, Google Drive, etc.)

Plagiarism Check

University and Some labs use plagiarism software

- drafts of papers before submitting
- Thesis
- □ Free plagiarism check- e.g grammerly

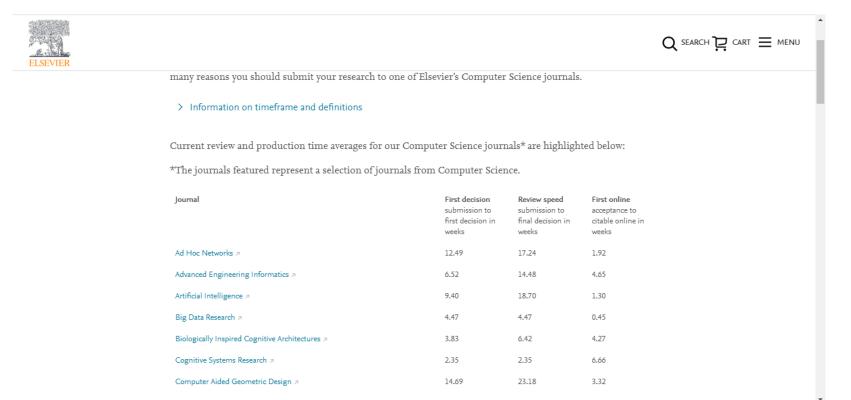
Professional Editing Firm

- \Box Key point for scientific writing \rightarrow clarity
- Grammar
- Usage

Journal Review Time

Depends on the journal

Top most journal takes around 3 to 6 months for first decision



Journal submission cover letter

General info

- Editor's name (when known)
- Name of the journal to which you are submitting
- Your manuscript's title
- Article type (review, research, case study, etc.)
- Submission date
- Corresponding author contact information
- Summary of research
 - Brief background of your study and the research question you sought to answer
 - Brief overview of methodology used
 - Key findings and significance to scientific community
- In case of the extension of the previous conference version
 - Summary of enhancements

After the first decision

Accepted?

- Accept with no change(rare)
- Accept with minor revisions (Try to resubmit as fast as possible)
- Major revisions needed(Try to enjoy the positive criticism)
- Rejected?
 - Administrative reject by editors? Reject from peer review process?
 - Carefully read every comments
 - Do the right response
 - Resubmit elsewhere

Replying Reviewer's comments positively

- □ Answer completely
 - Make sure all of the referee comments are replied in sequence
- Answer Politely
 - Can disagree with the reviewers but avoid arrogant remarks (E.g "We total disagree", "The reviewer does not know this field"... It should be "We agree with the referee but....)
- Answer with evidence

Providing references, adding some extra text and data

Do what the reviewer asks whenever possible

Ref: How to reply to peer review comments when submitting papers for publication by HC Williams



- MTU has been improving in many areas, thanks to all teachers, JICA and Japanese Professors
- Let's save time for research and start writing.

THANK YOU