Resources for Writing and Publishing Scientific Papers

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When researching, there are some key factors that matter the most: searching publications to read, knowing the quality of those publications, writing down the results of your research work, and publishing them. In between, you might want to manage your time and your information.

For each of these tasks, there is a section that lists the most useful tools in each case, along with a short description, so you can make the most out of them.

Finally, I hardly recommend reading A Survival Guide to a PhD by Andrej Karpathy, the Sr. Director of AI at Tesla.

The resources that I use the most are marked with the symbol "■" before their names.

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2 PUBLICATIONS SEARCH ENGINES

In this section, you can find different kinds of search engines. They can be classified into several main groups, depending on your goal:

- **Authors**: Knowing more about an authors, and potential related authors on a topic.

- **Papers:** Gather papers related to a specific topic.

- **Conferences:** Searching potential conferences to publish our research.

- **Books:** Finding a specific book.

- **Research topics:** Know potential related topic to a given one.

2.1 Authors

These search engines are interesting if you want to know more information about an author that you consider important.

2.1.1 ■ dblp

dblp provides open bibliographic information on major computer science journals and proceedings. It gives you the majority of the publication of an author. It is useful to get a general idea of what topics each author is researching. You can also search publications or topics.

2.1.2 Semantic Scholar

Semantic Scholar is a powerful tool to know how authors are related among them, and to know relevant authors in a specific topic.

2.2 Papers

These search engines will help you to find the most relevant papers in your topic.

2.2.1 ■ Google Scholar

Google Scholar is the most powerful search engine, and usually returns a large number of papers. Some of them might be accessible, but other might have only the abstract available. Nevertheless, it usually merges the results of other search engines (but not always). Therefore, it is always a good idea to use it together with another engine.

2.2.2 ■ IEEE Xplore

IEEE Xplore might be the most important engine for engineers.

2.2.3 ■ arXiv

arXiv is more related to basic science, but interesting papers from other fields can be found here too.

The main use of arXiv is for upload preprint versions of your manuscripts, before submitting them to be reviewed in a journal. This assures that your ideas are time-stamped, creating a proof that you starting working on that topic, in the case other researchers achieve publishing similar ideas before you.

Moreover, arXiv can also be use to upload manuscripts with ideas that you would like to reference in a paper, but you don't have time to publish beforehand.

2.2.4 Others

- Engineering Village.

- Elsevier.

- Science Direct.

- ACM Digital Library.

- Springer Link.

2.2.5 □ SCI-HUB

SCI-HUB is a database where you can access to a ridiculously huge amount of documentation (illegally) for free. You can search by title, URL, ISBN, DOI. . . just try if it works. Note that this MUST be your LAST OPTION when you are trying to find bibliography online. Use it when there is no other choice, not because it is easier and more comfortable. Take care of yourself if you are going to use this: use a proxy, VPN, Tor browser (I will not give you more ideas).

2.3 Books

2.3.1 Google Books

Google Books, as they say, is the world's most comprehensive index of full-text books. Sometimes, there are previews available of the book you are looking for. If you are lucky enough, the preview will include the chapters or pages (or paragraphs) that you want to read.

2.3.2 □ Library Genesis

Library Genesis, also known as LibGen, is a web page where you can find and download books for free from a wide catalogue. Note that this MUST be your LAST OPTION when you are trying to find any book online. Use it when there is no other choice, not because it is easier and more comfortable. Take care of yourself if you are going to use this: use a proxy, the Tor browser (I will not give you more ideas).

2.3.3 □ PDF Drive

pdfdrive

2.3.4 □ Z Library

Z Library

2.4 Conferences

Out there, there's plenty of information about Call For Papers of conferences. Nevertheless, some of them are more popular than the others. I always recommend to compare results, and check the information in the official web page of the conferences.

2.4.1 ■ WikiCFP

Wiki Call For Papers is a semantic wiki for Calls For Papers in science and technology fields. There are about 50,000 CFPs on WikiCFP. Here, you can search by terms, and the Wiki will return the conferences related to that topic, and the deadline for the paper submission.

3 QUALITY OF A PUBLICATION

3.1 Papers

The impact index measures the impact that a journal has had on the scientific literature by analysing the citations that the articles published in it have received. It provides a relationship between the number of articles published in a given period and the number of citations received in that period.

It doesn't matter which one you use. The only rule here is to choose always the highest quartile available for a journal. Always keep that in mind. Nevertheless, if you're planning to continue with your research career, it is a better option to follow the information in the JCR, because it is more restrictive, and also it is the reference for many public organisations.

3.1.1 ■ SJR

SJR (Scimago Journal Rank). It also offers information on the impact of magazines, and country performance, evaluating the information extracted from Elsevier's Scopus. It is free.

3.1.2 JCR

JCR (Journal Citation Report). High impact journals are officially indexed on the Web of Science (WoS) and included in the JCR. It is the official source of information today. The access to this platform is usually granted by the university using the corresponding credentials.

3.2 Conferences

3.2.1 ■ GII-GRIN-SCIE

GII-GRIN-SCIE is usually the reference search engine to know the quality of a conference. It it better to search by acronym when possible. This is an initiative sponsored by GII (Group of Italian Professors of Computer Engineering), GRIN (Group of Italian Professors of Computer Science), and SCIE (Spanish Computer-Science Society).

3.2.2 Conference Ranks

Conference Ranks is another web where you can look up the ranking of a conference using the ERA Ranking (2010), the Qualis Ranking (2012), and the MSAR (2014).

3.2.3 Core Conference Portal

Core Journal Portal uses CORE and ERA rankings.

4 WRITING TOOLS AND LATEX

It's true that almost all the journals and conferences offer templates both in Word and LATEX. Nevertheless, don't compromise the seductive easiness of Word, over the power and quality of LATEX. It might be a little difficult to work with it at first, but I can assure that the result is worth it.

4.1 Editors

As you might expect, this section is fully dedicated to LATEXeditors and tools. It's important that you start hating Word as soon as possible. But don't worry, that will come by its own.

4.1.1 ■ Overleaf

You can install a local LATEXcompiler and an editor, but Overleaf offers an online tool that need no installation. It is becoming the *de facto* tool for writing manuscripts. Overleaf also offers a wide variety of templates that you can use, and it's FREE.

4.2 Maths

4.2.1 ■ Detexify

Detexify is an online tool that helps you to know how to write any symbol in LATEX, using an draw-based search.

4.2.2 ■ LaTeX Equation Editor

LaTeX Equation Editor is an online equation editor that shows a really friendly user interface. Using the option in the toolbar, you can write any mathematical expression in a very easy way, and it will generate the LATEXcode for you, so you don't have to think... too much.

4.2.3 ■ HostMath Editor

HostMath - Online LATEXFormula Editor is another online equation editor that works in the same way as the previous one. The user interface let you introduce any mathematical expression, and it will generate the LATEXcode for you.

4.2.4 Mathpix Snip

Mathpix Snip is a tool that extract LATEXfrom PDFs or handwritten notes in seconds just by taking a screenshot. To use it, you must download it and install it in your PC. It seems to have a limited number of uses before the program asks you to upgrade. You can have more conversions creating an account.

4.3 Tables

Online tools to generate LATEXtables in a user-friendly manner. I usually generate the main frame of the table with these tools, but you can achieve to generate the full table.

4.3.1 ∎ Table Generator

Table Generator is an online tool that helps you create tables in LATEX. It offers an intuitive interface and generates the code in LATEX. It can be useful to create the framework of your table, as a first sketch.

4.3.2 ∎ LATEXtables

Latex tables is an online tool that helps you create tables in LATEX. It offers more options than the previous one, but for simple tables is better the first one because is simpler.

4.4 Grammar and Spelling

It's always a good idea to integrate a grammar and spelling checking tool.

4.4.1 TeXtidote

TeXtidote is a correction tool for LaTeX documents.

4.4.2 ∎ Grammarly

Grammarly is a web browser extension that helps you to compose clear, mistake-free writing.

4.4.3 Squeezing space with LATEX

Squeezing Space With LATEX is useful when you have space limitations. It's a package that can reduce the amount of space that is needed in a manuscript. This can give you more line of text.

4.4.4 Acronyms

Acronyms package manages acronyms in a LATEXfile. I really encourage you to use an acronym management tool.

4.5 Writing papers

This tools are more related to the writing of a manuscript: key sentences, structure, linking words ideas... They really come in handy.

4.5.1 ∎ DeepL

DeepL is the quintessential translator. It offers a small list of languages, but the results of the translations are near perfection. You can write like a native using this. It is also useful to check your own texts. It works using deep learning, so the more text you type to translate, the more accurate the result will be.

4.5.2 ∎ Thesaurus

A thesaurus is a list of words ordered in groups according to their relation in meaning, concept, and by synonyms. Word Hippo and Power Thesaurus are really useful tools when you want to find a different word for a sentence, or a more precise one.

4.5.3   Oxford Collocation Dictionary

Oxford Collocation Dictionary shows words commonly used in combination with each headword: nouns, verbs, adjectives, adverbs, and prepositions, common phrases. This is because it contains collocations, common word combinations such as are the essential building blocks of natural-sounding English. For example, if you search "idea", you will see that "bright" is the first in the list, but "good" takes the fifth place. So it sounds more natural to say "bright idea" than to say "good idea". And this applies to finding the right preposition, adjective, or verb for any situation, and to sound more natural.

4.5.4   Netspeak

Netspeak I recommend you to read the Help Page to really know how it works.

4.5.5   ■ Academic Phrasebank

Academic Phrasebank is a general resource for academic writers. It aims to provide examples of some of the phraseological 'nuts and bolts' of writing organised according to the main sections of a research paper or dissertation (see the top menu). The phrases, and the headings under which they are listed, can be used simply to assist you in thinking about the content and organisation of your own writing, or the phrases can be incorporated into your writing where this is appropriate.

4.5.6   English for Writing Research Papers Book

English for Writing Research Papers is a book that contains a lot of information about writing scientific literature in English.

4.5.7   Latexdiff

Latexdiff is an invaluable utility that makes it easy to markup and view changes made to the document. It definitely reduced my burden of having to read through two files simultaneously, where it would be easy to overlook subtle changes like word substitutions and changing numbers or signs in an equation.

4.6   Templates

Sometime you don't want to write papers, but other things. Here you can find a lot of templates. There is always one for each or your ideas.

4.6.1   TeXample

TeXample is a web site dedicated to the wonderful world of figures and images in TeX and friends.

4.6.2   Overleaf Templates

Overleaf Templates is the official web of templates of Overleaf.

5 REFERENCE MANAGER

5.1 Mendeley

Mendeley is a free reference manager and academic social network that can help you organise your research, collaborate with others online, and discover the latest research. It automatically generates bibliographies (in various formats), you can easily import papers from other research software and find relevant papers based on what you're reading and access your papers from anywhere online. There is a web browser extension available as well as a desktop app.

5.2 Zotero

Zotero is a free, easy-to-use tool to help you collect, organise, cite, and share research. It is very useful when you want to reference a web page (blog, YouTube video, corporative web, etc.). It is available as a web browser extension and as a desktop app.

6 MANAGEMENT TOOLS

6.1 ■ Notion

Notion is a all-in-one workspace that can be synchronised with the previous tools. It is free for personal use. The main drawback is that even the desktop version needs Internet to work.

6.2 ■ Trello

Trello is a visual tool that helps you organise your tasks, creating cards. If you usually use the Pomodoro technique, Pomello is a minimalist desktop app that turns your Trello cards into Pomodoro tasks. KanbanFlow is a similar tool to Trello, but the columns in the Kanban method are predefined.

7 OTHER TOOLS

7.1 ■ ORCID

ORCID ORCID is a nonprofit organisation helping create a world in which all who participate in research, scholarship and innovation are uniquely identified and connected to their contributions and affiliations, across disciplines, borders, and time. It is really important to have an ORCID number as a researcher, so you can be uniquely identified. This is a example of a superb profile in ORCID.

7.2 ■ Draw.io

Draw.io is a free online diagram software for making flowcharts, process diagrams, org charts, UML, ER and network diagrams.

7.3 ■ WolframAlpha

WolframAlpha is a computational knowledge engine or answer engine. It is an online service that answers factual queries directly by computing the answer from externally sourced "curated data", rather than providing a list of documents or web pages that might contain the answer, as a search engine might.

7.4 ■ I Love PDF

I Love PDF offers every tool you need to work with PDFs in one place. You can merge, split, compress, convert, rotate, unlock and watermark PDFs with just a few clicks.

7.5 ■ Sublime Text

Sublime Text is a sophisticated text editor for code, markup and prose. This is THE editor.

7.6 ■ Anonymous GitHub

Anonymous GitHub anonymizes your repository in 5 min for submitting to a journal or conference.