



Scientific paper writing - Abstract and Extended abstract

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The title

- ❖ Is this a good title?
 - ❖ What do you expect from this article?
 - ❖ Is it specific enough to tell you what the article is about?
 - ❖ Is it concise enough to generate your interest?
 - ❖ Your opportunity to attract the reader's attention.
 - ❖ Keep it **informative and concise.**
 - ❖ Avoid technical jargon and abbreviations if possible.
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The abstract

- ❖ **Abstract – tell the prospective readers what you did and what were the important findings**
 - ❖ This is the advertisement of your article. Make it interesting, and easy to be understood without reading the whole article
 - ❖ You must be **accurate and specific!**
 - ❖ A clear abstract will strongly influence whether or not your work is further considered.
 - ❖ Keep it as **brief as possible!!!**
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Keywords

- ❖ Keywords – mainly used for indexing and searching
 - ❖ Don't be too narrow, and neither too broad
 - ❖ Avoid abbreviations
 - ❖ Check the Guide for Authors!

 - ❖ **TIP: Search for your keywords online. Would readers find YOUR article using these keywords?**
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Back to Abstract

- ❖ The abstract of a paper is the only part of the paper that is published in conference proceedings.
 - ❖ The abstract is the only part of the paper that a potential referee sees when he is invited by an editor to review a manuscript.
 - ❖ The abstract is the only part of the paper that readers see when they search through electronic databases.
 - ❖ Finally, most readers will acknowledge, with a chuckle, that when they leaf through the hard copy of a journal, they look at only the titles of the contained papers. If a title interests them, they glance through the abstract of that paper. Only a dedicated reader will pursue the contents of the paper, and then, most often only the introduction and discussion sections. Only a reader with a very specific interest in the subject of the paper, and a need to understand it thoroughly, will read the entire paper.
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- ❖ Thus, for the vast majority of readers, the paper does not exist beyond its abstract.
 - ❖ For the referees, and the few readers who wish to read beyond the abstract, the abstract sets the tone for the rest of the paper.
 - ❖ It is therefore the duty of the author to ensure that the abstract is properly representative of the entire paper. For this, the abstract must have some general qualities.
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The abstract is a condensed and concentrated version of the full text of the research manuscript. It should be sufficiently representative of the paper if read as a standalone document.

The abstract must be as detailed as possible within the word count limits specified by the journal to which the paper is intended to be submitted. This will require good precis writing skills, as well as a fine judgment about what information is necessary and what is not.

The abstract must contain as much information as possible on the analyses related to the primary and secondary outcome measures.

The abstract should not present a biased picture, such as only favorable outcomes with the study drug, or findings that support the authors' hypotheses; important nonsignificant and adverse findings should also receive mention. Thus, to the extent possible, the reader should be able to independently evaluate the authors' conclusions.

Checklist: Parts of an Abstract

- ❖ Despite the fact that an abstract is quite brief, it must do almost as much work as the multi-page paper that follows it. This means that it should in most cases include the following sections. Each section is typically a single sentence, although there is room for creativity. In particular, the parts may be merged or spread among a set of sentences. Use the following as a checklist for your next abstract:
- ❖ **Motivation:**
 - Why do we care about the problem and the results? If the problem isn't obviously "interesting" it might be better to put motivation first; but if your work is incremental progress on a problem that is widely recognized as important, then it is probably better to put the problem statement first to indicate which piece of the larger problem you are breaking off to work on. This section should include the importance of your work, the difficulty of the area, and the impact it might have if successful.



Checklist: Parts of an Abstract

❖ **Problem statement:**

- What problem are you trying to solve? What is the scope of your work (a generalized approach, or for a specific situation)? Be careful not to use too much jargon. In some cases it is appropriate to put the problem statement before the motivation, but usually this only works if most readers already understand why the problem is important.

❖ **Approach:**

- How did you go about solving or making progress on the problem? Did you use simulation, analytic models, prototype construction, or analysis of field data for an actual product? What was the extent of your work (did you look at one application program or a hundred programs in twenty different programming languages?) What important variables did you control, ignore, or measure?



Checklist: Parts of an Abstract

❖ **Results:**

- What's the answer? Specifically, most good papers conclude that something is so many percent more accurate, faster, cheaper, smaller, or otherwise better than something else. Put the result there, in numbers. Avoid vague, hand-waving results such as "very", "small", or "significant." If you must be vague, you are only given license to do so when you can talk about orders-of-magnitude improvement. There is a tension here in that you should not provide numbers that can be easily misinterpreted, but on the other hand you don't have room for all the caveats.

❖ **Conclusions:**

- What are the implications of your answer? Is it going to change the world (unlikely), be a significant "win", be a nice hack, or simply serve as a road sign indicating that this path is a waste of time (all of the previous results are useful). Are your results general, potentially generalizable, or specific to a particular case?

Abstract vs. Ext. abstract

- ❖ Some conferences ask for an extended abstract. What are the differences among "abstracts," "extended abstracts," and "full papers?,"
 - **Generalized:** The answer could be conference specific but generally a full paper is about 10-15 pages long, an extended abstract would be 1-4 pages long (generally 1 or 2 pages with figures and explanations) and an abstract is generally a few hundred words long..
 - An abstract is a preliminary submission that summarizes the contribution of a paper. There are usually strict limits on the length of an abstract, either in terms of words or of total characters (rarely do they exceed 1000 words; they are often substantially shorter than this (150 – 350).
 - An extended abstract and a full paper are nearly the same; the primary difference is that an extended abstract tends to be somewhat shorter than a full paper; I've seen extended abstracts from 2 pages up to 6 pages, while conference papers run from 4 up to about 12 or 15, depending on the space allotted.

Extended Abstract

- ❖ "An extended abstract is not simply a long abstract. The extended abstract should contain references, comparisons to related works and other details expected in a scientific paper but not in an abstract.

"An extended abstract is a research paper whose ideas and significance can be understood in less than an hour of reading. Writing an extended abstract can be more demanding than writing a research paper.

"Some things that can be omitted in an extended abstract are, for example, future work, very specific details of tests, institutional information and ramifications that are not relevant to the key ideas of the abstract.,,"

(William Pugh W. *Advice to authors of extended abstracts.*)

Extended Abstract

- ❖ "An ideal submission should have the reviewer intrigued within the first 5 minutes of reading, excited within 15 minutes and satisfied within 45. If your abstract fails any of these tests, it may be rejected no matter how good your research is."

"Neither overlook the importance of introduction, examples and conclusions nor eliminate relevant images because of number of pages limitation.

"Remember that your work will be read by many non-specialists of your research area. Thus, the expanded abstract must be written in a clear, straightforward and easy to understand manner, so it can be easily assimilated. Doing so, you can better attract general public to your research."

❖ The General structure of the full article

- **Title**
 - **Authors**
 - **Abstract**
 - **Keywords**
- Make them easy for indexing and searching! (informative, attractive, effective)
- **Main text (IMRAD)**
 - Introduction
 - Methods
 - Results
 - And
 - Discussion (Conclusions)
- Journal space is precious. Make your article as brief as possible. If clarity can be achieved in n words, never use $n+1$.
- **Acknowledgements**
 - **References**
 - **Supplementary material**

Teplate

❖ Author guidelines of the „Geodetski list“

❖ Template:

TITLE

(TIMES NEW ROMAN, 24 FONT SIZE, BOLD, ALL CAPS, CENTERED)

Author's Name and Surname¹, Author's Name and Surname² (12 font size)

¹Affiliation

E-mail

Abstract: Abstract should be written with 10 font size, Times New Roman, single line spacing. Summarize in this section **objective, method and findings**.

Keywords: This section should contain maximum 5 words separated by commas.

GENERAL GUIDELINES

The extended abstract must contain the following sections: **abstract and keywords, introduction, methodology, findings, conclusion, and references**. Section can be named differently and subsections can be included.

The extended abstract shall be written in font *Time New Roman*, single line spacing and 11 font size. The extended abstract should contain a minimum of 1000 words and a maximum of 2500 words. Extended abstracts can contain figures, tables and/or images which are not included in the word count. The references are not included in the word count as well. Page format should be A4 page size with margins 2.5 cm wide from the right, left, top and bottom. Pages should not be numbered.

Supporting figures, tables and images of the results (no more than two figures and two tables) may be included in the extended abstract.

All the tables, images and figures should be centered. Figures and images should be numbered (see Figure 2 for an example) and figure headers should be placed under the figure or image; as for the tables, they should also be numbered (see Table 2 for an example) and the table header should be placed at the top. References (if any) of the tables, figures and images should be presented right under the tables, figures and images in the form of author surname and publication date.

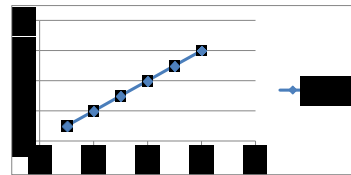


Figure 2. Header

Conclusion

- ❖ Writing an efficient abstract is hard work, but will repay you with increased impact on the world by enticing people to read your publications. Make sure that all the components of a good abstract are included in the next one you write (Koopman 1997).
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References

- ❖ Philip Koopman, 1997: How to Write an Abstract. Carnegie Mellon University, October, 1997.
- ❖ Chittaranjan Andrade: How to write a good abstract for a scientific paper or conference presentation. Indian J Psychiatry. 2011 Apr-Jun; 53(2): 172–175. doi: 10.4103/0019-5545.82558
- ❖ William Pugh W. Advice to authors of extended abstracts. Dept. of Computer Science and Institute for Advanced Computer Studies, University of Maryland, College Park:
www.eecs.harvard.edu/cs245/pughadvice.html
- ❖ How to Write a World Class Paper, From title to references, From submission to revision, From title to references, From submission to revision. September 2009, Elsevier.