Editorial

Titles and Abstracts

Expecting the arrival of a newborn member in a family is always a cause of great excitement. One of the most important tasks at that time is the selection of the child's name. In some cultures, highly structured protocols determine the name, while in others it is more casually a parental decision. In all cases, the child's identity is inexorably linked with that name, usually for life.

So it is also with research papers. These days, most papers are products of collaboration by the research team family. Just as for a name, the choice of title is an important decision for presenting this product to the world; it should be done with the requisite care and following the appropriate protocols. In the ASME instructions to journal authors the following is provided:

Paper Title
The title of the work should be concise and definitive. It should be grammatically correct and contain no typographical errors. The paper title should be provided in upper and lowercase letters, not all capitals or lowercase letters.

Correct: This is How a Paper Title Should be Typed
Incorrect: This is not how a paper title should be typed IT SHOULD ALSO NOT BE TYPED LIKE THIS
Additional Recommendations:

- Prepositions and conjunctions of four (4) or more letters should be uppercase: e.g., With, From, That, Which, Until, About, Through; but, and, is, the, an, be, for.
- Special terms should be provided as they are known or understood by the industry. This includes acronyms, abbreviations, computer program names and codes, units of measure, etc.
- If the paper you are submitting was published in a conference proceedings and therefore has a unique paper number, e.g., GT-2003-546, please include this number in parentheses at the end of the paper title.

Apart from the formatting technicalities, the ASME guidance is indeed "concise and definitive." *Concise* means "marked by brevity of expression or statement: free from all elaboration and superfluous detail" [Merriam-Webster http://www.merriam-webster.com/dictionary]. I might have preferred the synonym "laconic," if modern Laconians were not putting the meaning of the word in doubt. *Definitive* is trickier, as it can have several meanings, but the most pertinent meaning might be "serving to define or specify precisely" [Merriam-Webster, op. cit.]. Simply put, keep the title short and without double meanings. For example, do not employ the ordinary use of a word that has both an ordinary and a technical meaning: Saying "chaotic derivatives of the product" to mean "an utterly confusing collection of designs derived from an existing manufactured artifact" or something like that.

Well, now your child is growing up and is joining a social network. For the network to be useful, your child will need to provide some more information besides a name. This information could be related to location, anthropometry or preferences, but its goal is to give others a quick understanding of the person behind the name, and whether it is worth knowing this person better.

So it is also with the abstracts of research papers. Here is what the ASME guidelines say about abstracts:

The abstract (required for research papers and technical briefs) should give a clear indication of the objective, scope, and results of the paper. The abstract should be text only (no special characters, Greek, or math please) and no more than 400 words. The abstract text can be typed directly in the field provided or you can cut and paste into this field from a word-processing file. (Please keep in mind the length of a user session is 1.5 hours.) [http://journaltool.asme.org/Help/AuthorHelp/WebHelp/JournalsHelp.htm#Guidelines/Getting_Started.htm]

Elsewhere, ASME has provided some further instruction:

An abstract (400 words maximum) should open the paper or brief. The purposes of the abstract are:

1. To give a clear indication of the objective, scope, and results so that readers may determine whether the full text will be of particular interest to them.
2. To provide key words and phrases for indexing, abstracting, and retrieval purposes.

The abstract text should be organized to include the following categories in the order noted:

- Background
- Method of Approach
- Results
- Conclusions

Let me refine these instructions somewhat. The 400-word "maximum" is an upper bound, and should be avoided. An abstract with 150–200 words would be just right. Frequently, I have to return final manuscripts to the authors for further editing of the abstract to reduce wordiness and to insert information about the work reported. This is causing publication delays but it is really a service to the authors. The separation into categories above, like background, etc., should be implicit in the text. You do not need and you should not break the abstract into parts with these headings.

You can find many sources for more detailed advice on how to write a good abstract. I like the one offered by the University of Mississippi Writing Center at http://www.olemiss.edu/depts/writing_center/grabstract.html, which I could easily recommend for JMD authors. The site has a particularly appealing example that is more familiar than you might think:

Spoof of an Abstract
This paper discusses research which was undertaken in the author's country. A theoretical framework is developed from a literature search and this is used by the authors as the basis of an analytical model. The researchers collected data within this framework and analyzed it according to the precepts laid down by ear-

lier researchers in the field. The data is used to demonstrate that our understanding can be significantly increased and this is discussed in the light of previous work. Conclusions are drawn and it is shown that these may be useful for practitioners.

This makes me recall an old professor of mine admonishing against ZIS (Zero Information Statements): sentences that give you nothing more to know after you read them than what you knew before you read them—but let us save this topic for another time.

Electronic submission of manuscripts allows quick accommodation of changes in titles and abstracts even at a late stage, but authors are served better when devoting time for a good title and abstract in the very first submission of their work.

Panos Y. Papalambros