Probabilities in Practice

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ABSTRACT: The abstract is written last, when the paper is complete. It contains a summary of the paper, usually starting with a few words about the objectives. Thereafter follow usually statements about the importance of the work and the methodology that is employed. The key results are then summarized followed by an overview of the conclusions that were drawn from the study.

The ICASP conferences are held every four years and seek to gather researchers and practitioners to present and discuss the state-of-the-art in probability and statistics applied to civil engineering problems. Professors and leading practitioners are particularly encouraged to make presentations because their experience will allow them to include comments about where they think the discipline should go in the future.

Authors who were invited to submit a full paper are asked to follow the guidelines posted at the conference website. That includes using this document as a template. This document is created in Word using "styles," which define the format of each paragraph. Notice for example that the paragraph above has the style Firstparagraph, implying that there is no indentation of the first line.

That style should be applied to every paragraph that follows immediately after a heading. It is also an appropriate style immediately after equations, when the text is a natural continuation of the equation. In contrast, the Normal style assigned to this paragraph features an indentation of the first line.

In regards to styles, it is also noted that the title of the paper is assigned the Title style. The capitalization of the first letters must be done manually. After the title follows the Authorname and the Authoraffiliation styles. All styles in this document employ the Times New Roman font type, but the font sizes differ. The title is 18pt, the author names are 14pt, the author affiliations are 12pt, the Normal text is 12pt, the captions and references are 11pt, and the header is 10pt.

The space allocated to the author list is elastic; the more authors the more space it will take. There is a concealed Section Break after the author list that provides this elasticity. Section breaks are part of the hidden codes, i.e., nonprinting characters in Word. If you encounter strange problems with this document then one reason might be that you are unaware of hidden codes. In this document the most important nonprinting character is the Section Break in the empty paragraph immediately after the last author affiliation.

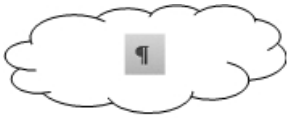

Figure 1: Nonprinting characters in Word (notice the line break below this caption, to provide some air).

In addition to the abovementioned elasticity, the section break is required to facilitate the two-column format and must not be removed. To view

it, press the appropriate toolbar button in Word, shown in Figure 1.

Notice that the above reference to a figure is inserted by using the cross-reference feature in Word. Although slightly more cumbersome, this can also be done also for equations such as

$$p_f = \Phi(-\beta) \tag{1}$$

where the Equation style is used and the equation number is a caption, i.e., it turns grey if you drag the cursor over it. That means that it can be referenced elsewhere, and doing so requires three magic steps. First, temporarily insert a line-break immediately before the opening parenthesis of the equation number. Second, write Eq. where you want to reference the equation and insert a Cross-reference from the Insert menu, using the "Entire caption" option. The result is Eq. (1). Third, remove the line-break that you inserted in the first step. Also note that this paragraph, immediately following an equation, has the Firstparagraph style to avoid indentation of the sentence that forms a continuation of the equation.

Table 1: Parameter values.

a	b	c
1.0	2.0	3.0

An example of a table is also included in this template and the reference to it is Table 1. Again notice that this is a cross-reference that is automatically updated. Borderlines in the table may be removed if it improves readability. Finally, if citations are needed, then please use the ASCE citation format **?**, making sure to cite all references that are included in the reference list.

1. GOOD HABITS OF TECHNICAL WRITING

A few ideas are provided in the following on how to create strong academic papers. These are not strict rules but perhaps some of them will be useful:

- Understand that a pedagogical presentation is as important as the content; focus aggressively on clarity: First write, then rewrite and revise, then put the text aside for a while before reviewing, rewriting, and revising again.
- While focusing on a clear and inspirational presentation, never compromise on technical quality and academic integrity.
- To improve your writing, study and imitate the style and phrasing of publications that you find particularly clear and inspiring.
- Define who your readers are and continually imagine them reading what you write.
- Always start writing a paper by spending significant time setting up a bullet-itemized outline; a guideline is provided in the section below.
- Let each paragraph have one topic and provide meaningful links between paragraphs to assist the flow of the text. Write grammatically active and complete sentences in accordance with the rules that are described later in this document.
- Continuously search for more formal words to replace informal ones; this improves the style, clarity, and suitability of an academic paper
- Keep the sentences short and concise; mercilessly place each word on a imaginary scale to test if it really justifies its presence.
- Avoid abbreviations unless they significantly improve the readability and brevity of the subsequent text; if an abbreviation is necessary then define it only once, where it first appears.
- Always describe and discuss the content of tables and figures in the text, but do not duplicate data from those elements in the text.
- Avoid the use of boldface, italics, underline, parenthesis and other importance labels in the text; state everything with words

2. PROPER INTRODUCTIONS

Although a section named Introduction is not mandatory, the importance of the introductory part of a paper cannot be overemphasized. Although it does not contain the substance of the paper it sets the stage and establishes the tone of the paper. A poor introduction usually identifies a poor paper. A proper introduction may result from following these steps:

1. Start with a thoughtful first sentence that concisely summarizes the objective and why it is important; above all, inspire the reader to read

on
2. State the long-term goals and visions of the work
3. State the short-term objectives that are specifically addressed to achieve the long-term goals
4. State the scope of the work to identify the problems that are, or are not, considered
5. Identify who has done what in the past. Sometimes, this review requires a separate section. However, care should be exercised to avoid an unnecessarily lengthy literature review. A concise and well-informed exposure of the background fits in the introductory section.
6. Depending on the complexity of the paper, provide an overview of the sections. This type of overview is more common in books, reports, and theses than in conference and journal papers.
7. Identify the novelties of the paper to let the peer reviewer understand that there is something new in this paper, and to let the general reader know which highlights to look out for

3. THE MEAT OF THE PAPER

Between the Introduction and the Conclusions there exist no mandatory section organization. The outline depends strongly on the work that is carried out. The following two sections provide one suggested organization of the content.

3.1. Methodology

3.1.1. Build-up

Bring the reader up to speed on the existing methodology; be brief

3.1.2. Developments

Explain the new use, merger, or extension of the methodology; be detailed

3.1.3. Advantages

Candidly substantiate what is this better than what has been seen before

3.1.4. Contrast

Explain in detail how the new methodology compares with other approaches

3.1.5. Disadvantages

Honestly describe the pitfalls and downsides of the new developments

3.2. Application

3.2.1. Case selection

Employ realistic examples that bring out the best in the methodology

3.2.2. Enable reproduction

Give complete data to enable the reader to reproduce the results

3.2.3. Demonstrate

Show results that highlight what the developed methodology provides

3.2.4. Visualize

Include informative and visually appealing figures and tables

3.2.5. Discuss

State the experience gained from the examples: including new results, efficiency, etc.

3.2.6. Compare

Contrast the results with earlier work

4. CONCLUSIONS

The conclusions should not serve as a summary. Rather, the conclusions are observations from a higher and broader viewpoint. The conclusions should explicitly state the significance of the developments. The conclusions may also suggest problems to be addressed by future work.

5. REFERENCES