Style template and guidelines for SPIE Proceedings

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ABSTRACT

This document shows the desired format and appearance of a manuscript prepared for the Proceedings of the SPIE. It is derived from `spie.dot` (Version 2.7), which is a template for Microsoft Word. It contains general formatting instructions and hints about how to use it.

Keywords: Manuscript format, template, SPIE Proceedings, Microsoft Word

1. INTRODUCTION

This document shows the desired format and appearance of a manuscript prepared for the Proceedings of the SPIE. It is prepared using Microsoft (MS) Word 97. The MS Word template used to prepare this document is available on the Internet at `http://home.lanl.gov/kmh/spie/spie.dot`. The font used throughout is Times New Roman. If this font is not available, use a similar serif font. Normal text has a font size of 10 point[†], for which the actual height of a capital E is about 2.4 mm (7 pt.) and the line-to-line spacing is about 4.2 mm (12 pt.). The font attributes for other parts of the document are summarized in Table 1 and are described in the following sections. Normal text should be justified to both the left and right margins.

To be properly reproduced in the Proceedings, all text and figures must fit inside a rectangle 6.75-in. wide by 8.75-in. high or 17.1 cm by 22.2 cm. The margins of this template, 0.875 in. on left and right and 1.125 in. on top and bottom, are set for US letter-size paper (8.5 in. by 11 in.). The side margins should be reset for A4 paper to 1.8 cm on the sides, 2.9 cm on top, and 4.6 cm on bottom.

Table 1. Fonts sizes to be used for various types of text. All fonts are Times New Roman or an equivalent. Table captions should be centered above the table. When the caption is too long to fit on one line, it should be justified to the right and left margins of the body of the text.

Article title	16 pt., bold, centered
Author names and affiliations	12 pt., normal, centered
Section heading	11 pt., bold, centered (all caps)
Subsection heading	11 pt., bold, left justified
Sub-subsection heading	10 pt., bold, left justified
Normal text	10 pt., normal
Figure and table caption	9 pt., normal
Footnote text	9 pt., normal

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† Font sizes are usually specified in points, abbreviated pt, which is a unit of length. One inch = 72.27 pt.; one cm = 28.4 pt.

Authors are encouraged to follow the principles of sound technical writing, as found in Ref. 1, for example. Many aspects of technical writing are addressed in the *AIP Style Manual*, published by the American Institute of Physics. It is available on line at `http://www.aip.org/pubservs/style/4thed/toc.html`. Good English usage is essential. A spelling checker is helpful for finding misspelled words.

An author may use this template by substituting his/her own text in each field or by deleting all the text and employing the relevant style from the style list.

2. PARTS OF MANUSCRIPT

This section describes the normal structure of a manuscript and how each part should be handled. The appropriate vertical spacing between various parts of this template is achieved in MS Word by using the required paragraph spacing for each entry in the style list. Care must be exercised in using these styles to obtain the desired format.

At times it may be desired, for formatting reasons, to break a line without starting a new paragraph. This situation may occur, for example, when formatting the article title, author information, or section headings. Line breaks are inserted in MS Word (on an IBM PC computer) by simultaneously hitting Shift-Enter.

2.1. Title and Author Information

The article title appears centered at the top of the first page. The title font is 16 point, bold. The rules for capitalizing the title are the same as for sentences; only the first word, proper nouns, and acronyms should be capitalized. Avoid using acronyms in the title, unless they are widely understood. Consider the possibility that people outside your area of expertise might read your article. Appendix A contains more about acronyms.

The list of authors immediately follows the title after a blank space. The font is 12 point, normal with each line centered. The authors' affiliations and addresses follow the author list after another blank line, also in 12-point, normal font and centered. Do not use acronyms in affiliations and addresses. Very long addresses should be avoided here; full address information may be provided in a footnote. For multiple affiliations, each affiliation should appear on a separate line. Italicized superscripts may be used to identify the correspondence between the authors and their respective affiliations. Further author information, such as e-mail address, complete postal address, and web-site location, may be provided as a footnote to the author list.

When the abbreviated title or author information is too long to fit on one line, multiple lines may be used; insert line breaks (Shift-Enter, or Shift-Return) appropriately to achieve a visually pleasing format. Avoid using a carriage return (Enter or Return) in these fields because that will introduce excessive space between lines. This MS Word template automatically inserts the correct blank vertical space between the title, author list, and affiliations by specifying space after each field, indicated by the end of paragraph, which is introduced with a carriage return.

2.2. Abstract and Keywords

The title and author information is immediately followed by the Abstract. The Abstract should concisely summarize the key findings of the paper. It should consist of a single paragraph containing no more than 200 words. The Abstract does not have a section number. A list of up to ten keywords should immediately follow the Abstract after a blank line. These keywords will be included in a searchable database at SPIE.

2.3. Body of Paper

The body of the paper consists of numbered sections that present the main findings. These sections should be organized to best present the material. See Sect. 3 for formatting instructions.

2.4. Appendices

Auxiliary material that is best left out of the main body of the paper may be included in the appendices, for example, derivations of equations, proofs of theorems, and details of algorithms. Appendices are enumerated with upper-case Latin letters in alphabetic order, and appear just before the Acknowledgments and References.

2.5. Acknowledgments

In the Acknowledgments section, appearing just before the References, the authors may credit others for their guidance or help. Also, funding sources may be stated. The Acknowledgments section does not have a section number.

2.6. References

The References section lists books, articles, and reports that are cited in the paper. It does not have a section number. The references are numbered in the order in which they are cited. Examples of the format to be followed are given at the end of this document.

For books[1,2] the listing includes the list of authors, book title (in italics), page or chapter numbers, publisher, city, and year of publication. A reference to a journal article[3] includes the author list, title of the article (in quotes), journal name (in italics, properly abbreviated), volume number (in bold), inclusive page numbers, and year. By convention, article titles are capitalized as described in Sect. 2.1. A reference to a proceedings paper or a chapter in an edited book[4] includes the author list, title of the article (in quotes), conference name (in italics), if appropriate, editors, volume or series title (in italics), volume number (in bold), if applicable, inclusive page numbers, publisher, city, and year. References to an article in the SPIE Proceedings may include the conference name, as shown in Ref. 5.

Citations to the references are made using superscript numerals, as demonstrated in the preceding paragraph. One may also directly refer to a reference within the text, e.g., "as shown in Ref. 3..." Footnotes[‡] may used to provide auxiliary information that doesn't need to appear in the text, e.g., to explain measurement units. They should be used sparingly, however.

3. SECTION FORMATTING

Section headings are centered and formatted completely in upper case 11-point bold font. Sections should be numbered sequentially, starting with the first section after the Abstract. The heading starts with the section number, followed by a period. In MS Word the author must do this numbering.

Paragraphs that immediately follow a section heading are leading paragraphs and should not be indented, according to standard publishing style. The same goes for leading paragraphs of subsections and sub-subsections. Subsequent paragraphs are standard paragraphs, with 14-pt. (5-mm) indentation. There is a 5-pt. space between all paragraphs. In this MS Word template, this spacing is accomplished by including a 5-pt. space after each paragraph. Note that the indentation of a paragraph may be avoided in this MS Word by changing it to a leading paragraph.

3.1. Subsection Attributes

The subsection heading is left justified and set in 11-point, bold font. Capitalization rules are the same as those for book titles. The first and last words of a subsection heading are capitalized. The remaining words are also capitalized, except for minor words with fewer than four letters, such as articles (a, an, and the), short prepositions (of, at, by, for, in, etc.), and short conjunctions (and, or, as, but, etc.). Subsection numbers consist of the section number, followed by a period, and the subsection number within that section, followed by a period.

3.1.1. Sub-subsection attributes

The sub-subsection heading is left justified and its font is 10 point, bold. Capitalize as for sentences. The first word of a sub-subsection heading is capitalized. The rest of the heading is not capitalized, except for acronyms and proper names.

4. FIGURES AND TABLES

Figures are numbered in the order of their first citation. They should appear in numerical order and on the same page or after their first reference in the text. Alternatively, all figures may be placed at the end of the manuscript, that is, after the Reference section. It is preferable to have figures appear at the top or bottom of the page. Figures, along with their captions, should be separated from the main text by at least 0.2 in. or 5 mm.

[‡]Footnotes are indicated by symbols to avoid confusion with citations.

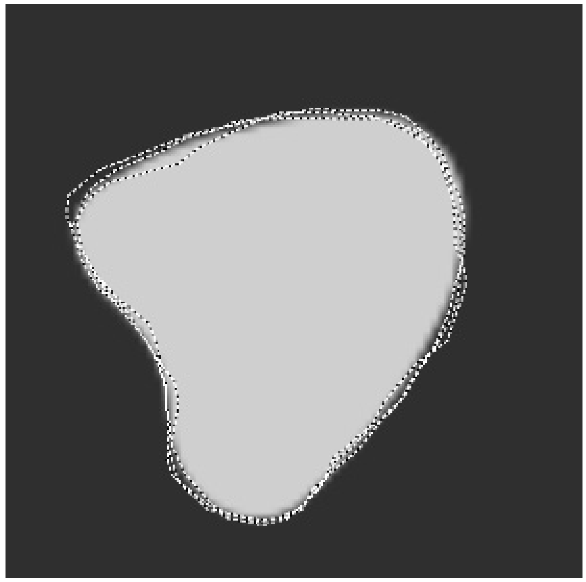

Figure 1. Figure captions are used to label the figure and help the reader understand the figure's significance. The caption should be centered underneath the figure and set in 9-point font. It is preferable for figures and tables to be placed at the top or bottom of the page.

Figure captions are centered below the figure or graph. Figure captions start with the figure number in 9-point bold font, followed by a period; the text is in 9-point normal font; for example, "**Figure 3.** Original image…" See Fig. 1 for an example of a figure caption. When the caption is too long to fit on one line, it should be justified to the right and left margins of the body of the text.

Tables are handled identically to figures, except that their captions appear above the table.

In this MS Word template, the caption style specifies a normal 9-point font, consistent with the requirement for the caption text. The author needs to make the figure number bold. The author also needs to supply the figure numbers in the order of reference in the body of the paper. The same goes for tables. It is often necessary in MS Word to move figures or tables around to achieve a satisfying appearance.

For further details concerning the inclusion of grayscale and color images, consult the *Author Guide for Publication and Presentation* supplied to authors by SPIE or SPIE's web page on manuscript preparation.

APPENDIX A. MISCELLANEOUS FORMATTING DETAILS

It is often useful to refer back (or forward) to other sections in the article. Such references are made by section number. When the section reference starts a sentence, Section is spelled out; otherwise use its abbreviation, for example, "In Sect. 2 we showed…" or "Section 2.1 contained a description…". References to figures, tables, theorems, etc. are handled the same way.

At the first occurrence of an acronym (unless it is widely known such as MTF, CCD, FFT), spell it out, followed by the acronym in parentheses, e.g., noise power spectrum (NPS).

A.1. Formatting Equations

Equations may appear inline with the text, if they are simple, short, and not of major importance; e.g., $\beta = b/r$. Important equations appear on their own line. Such equations are centered. For example, "The expression for minus-log-posterior is

$$\phi = |\mathbf{y} - \mathbf{A}\,\mathbf{x}|^2 + \alpha \log p(\mathbf{x}) \quad , \tag{1}$$

where α determines the strength of …" Principal equations are numbered, with the equation number placed within parentheses and right justified.

Equations are considered to be part of a sentence and should be punctuated accordingly. In the above example, a comma appears after the equation because the next line is a subordinate clause. If the equation ends the sentence, a period should follow the equation. The line following an equation should not be indented unless it is meant to start a new paragraph. In this MS Word template, indentation of a standard paragraph is avoided by changing it to a leading paragraph.

References to equations include the equation number in parentheses, for example, "Equation (1) shows..." or "Combining Eqs. (2) and (3), we obtain…"

A.2. Formatting Theorems

To include theorems in a formal way, the theorem identification should appear in a 10-point, bold font, left justified and followed by a period. The text of the theorem continues on the same line in normal, 10-point font. For example,

Theorem 1. For any unbiased estimator…

Formal statements of lemmas and algorithms receive a similar treatment.

ACKNOWLEDGMENTS

This unnumbered section is used to identify those people who have aided the authors in understanding or accomplishing the work presented and to acknowledge sources of funding.

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