ConfTNS-1c: Instructions for Authors of Papers Submitted for Publication in a Conference Issue of the IEEE Transactions on Nuclear Science [1]

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Abstract

Detailed instructions are given for preparing manuscripts in camera-ready format for publication in a Conference Issue of the Transactions on Nuclear Science. Papers published in Conference Issues are reproduced directly from the manuscript prepared by the author.

These instructions are intended to insure that papers will be reproduced clearly and in a uniform size and format. Authors are required to follow them explicitly.

Style instructions for various word processors are available.

I. INTRODUCTION

The *IEEE Transactions on Nuclear Science* (TNS) is a publication of the Institute of Electrical and Electronics Engineers (IEEE) that is issued six times a year. Each issue has a thin section consisting of papers that were submitted directly to TNS. These papers have been re-formatted by IEEE into a very uniform, standard format. Some issues also include a thicker section which is a Conference Issue. Conference Issues contain only papers that originated in a specific IEEE conference or symposium. Examples are the Nuclear Science Symposium/Medical Imaging Conference (NSS/MIC) and the Real-Time Computer Conference (RTC).

The papers in a Conference Issue are published directly from camera-ready manuscripts that are prepared by the authors. It is imperative that such manuscripts be prepared in a manner that results in a uniform appearance. This document presents detailed instructions for the formatting of such manuscripts. This document also serves as a model for a properly formatted manuscript.

The object of these instructions is to result in camera-ready manuscripts that have a uniform appearance that is as close as is practicable to that of papers in a ”thin” issue (See, for example, Part II of Vol. 43, No.1, February 1996).

To achieve this uniform appearance, it is required that authors follow the instructions in this document. Manuscripts that do not conform may be rejected unless the appearance is corrected.

In this document, the words “paper” and “manuscript” are used. “Paper” refers to the technical content of the document prepared by the author. “Manuscript” refers to the pages that convey the technical content of the paper.

[1]Acknowledgements of support and other footnotes to the title appear at the bottom of the first column and are set in 9 point type.

II. THE STRUCTURE OF A PAPER

A. Abstract Contents

The abstract should contain from 50 to 200 words and should concisely state what was done, how it was done, principal results and their significance. The abstract will appear later in various abstracts journals and should contain the most critical information of the paper.

B. Introduction Contents

The Introduction expands upon the Abstract, presenting background information on the work, the history of the subject matter, why the work presented in the paper was done, and why it is significant.

C. The Body of the Paper

The body of the paper presents the work in a clear and understandable manner. The body is normally divided into sections, subsections and sub-subsections as required to enhance the readability of the paper.

Readers of TNS are expected to be technically knowledgeable, but not necessarily specialists in the subjects being treated. Sufficient detail should be given that someone acquainted with the field of work (not necessarily an expert) can understand the relevance of the work, how it was done, and possible applications of the work. On the other hand, papers should not be longer than necessary to carry the significant information. For example, detailed operating instructions for an electronic device are usually not appropriate in a TNS article. Most papers will contain between three and eight pages. More than eight pages is rare and strongly discouraged.

Tables and figures may be included where they aid in the presentation of the work in a significant manner. Tables and figures should be sized such that they contrast appropriately with the text in the paper and thus are not excessively large or small.

D. Conclusions Contents

Authors may optionally include a Conclusions section at the end of the body of the paper. The Conclusions section can be used to summarize the salient points of the paper, the important results, the state of completion of the work, and further work that needs to be done. This section should not, however, simply repeat statements made in other parts of the paper.

E. Acknowledgments and References Sections

The Acknowledgments and References sections are at the very end of the paper. The Acknowledgments section can be used to recognize sponsors of the work, or others who have contributed to the success of the work.

It is important to include a References section. It should give references to previous works that were an important foundation to the development of the work described in your paper. Where specific manufactured products are mentioned in the paper, the name and address of the manufacturer should be cited in the References. (See also Section V in this paper.)

III. MANUSCRIPTS

This document is an example of the required layout and format of manuscripts submitted for publication in the Conference Issue of an NSS/MIC or an RTC.

Manuscripts must be printed on only one side of a page. The paper size must be U.S. Letter size paper (8.5 x 11 in) or A4 Letter paper (21.0 x 29.7 cm). They must be printed on a printer having 300 dots/inch, or better, resolution.

A. Two-Column Format

Manuscripts must have two columns per page. Column parameters are listed in Table 1.

Table 1
Column Parameters

Column Height	24.1 cm (9.5 in)
Column Width	8.9 cm (3.5 in)
Column Spacing	0.4 cm (0.17 in)

The printed area of the manuscript should be centered on the page. Appropriate margins for accomplishing this are in Table 2.

Table 2
Margin specifications for the two paper sizes

Margin	US Letter paper	Type A4 paper
Left/Right	0.67 in (1.7 cm)	1.4 cm (0.55 in)
Top/Bottom	0.75 in (1.9 cm)	2.8 cm (1.1 in)

B. Fonts

A proportionally-spaced, serif font is required. The strongly preferred font is Times, which is available in most word processors including LaTeX (in LaTeX, an equivalent font is acceptable if Times is not available). An exception to this is that lettering in figures is typically of a sans serif typeface (*e.g.*, Helvetica or Geneva). The main body of the manuscript is in 10 point font. The line spacing should result in about 6 lines per inch. Table 3 summarizes the font sizes to use in various parts of the manuscript. A non-proportionally- spaced font such as courier should not be used in the text, in figure or table captions, or within a figure or table.

C. Format of Title of Paper and Authors' Names

Center the title on the page so it runs across the upper portion of both columns on the first page, but stays within the left and right margins. The title should be in a 14 point font, using upper and lower case letters (not all capitals).

The initials, last name(s) and IEEE member status (in italics and if an IEEE member) of the author(s), their organizations, and their mailing addresses should appear on separate lines, in upper and lower case letters. In the case of multiple authors, initials and last names of all authors should appear together, one or more authors to a line. Likewise, authors organizations and mailing addresses should appear together, preferably one to a line when practical to do so. Use 12 point type for author names and 10 point for organization names and addresses. Allow 0.4 in (1.0 cm) between the organization address(es) and the top of the columns on page 1. See the title of this document for an example.

D. Heading Formats

In this document you will see examples of the proper formats for section headings and for table and figure headings. Specifications for these headings are given in Table 3. Note that there must be a double space between the enumeration character(s) and the text of the heading.

E. Subsection Heading Format

The above is an example of a subsection heading.

1) Sub-subsection Heading Format

The above is an example of a sub-subsection heading.

IV. FIGURES AND TABLES

Where possible, place figures and tables on the same page as the place of their first mention. All figures and tables must be given sequential numbers. Tables must have a caption at the top as shown in Table 1. Figures must have a caption at the bottom as shown in Figure 1.

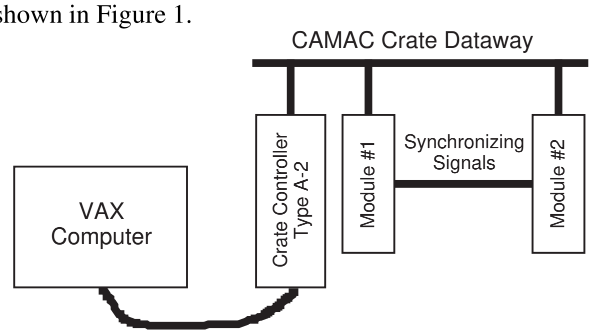

Figure 1: Example of the placement of a figure and its caption in a single column

Figures and tables should preferably fit within a column. However, if necessary because of the amount of detail, they may extend across both columns (but may not extend into the margins). Table 3 is an example of a two-column wide table.

Lettering in figures should be large enough to reproduce clearly. Such lettering may be in a sans serif typeface, to

Table 3
Required type sizes for the various parts of the manuscript

	Font Size	Style	Justification	Enumeration	Vertical Spacing
Title	14 point	Upper & lower case (Times font preferred)	Centered	Most all first letters in words capitalized	14 pt after
Authors' names	12 point	(Times font preferred)	Centered		
Organization name & address	10 point	(Times font preferred)	Centered		14 pt after address
Abstract heading	12 point	*Italics (Times font preferred)*	Centered	None	4 pt after
Main body	10 point	(Times font preferred)	Full justified; first line indented		4 pt extra between paragraphs
Main headings	12 point	LARGE AND SMALL CAPITALS (TIMES)	Centered	Roman numerals; [I, II, III, etc.]	12 pt total before; 4 pt after if paragraph
Subheadings	12 point	*Italics (Times font preferred)*	Left-justified	Capital letters; [A, B, C, etc.]	8 pt total before; 4 pt after if paragraph
Sub-subheadings	10 point	*Italics (Times font preferred)*	Left-justified; text follows on same line	Arabic numerals: [1), 2), 3), etc.]	8 pt total before; 4 pt after if paragraph
Table captions	9 point	(Times font preferred)	Centered; above table	Arabic numerals; [1, 2, 3, etc.]	10 pt total before; 4 pt after
Tables	Preferably 9 point	(Times font preferred)	Centered in column (or on page if 2 column)		10 pt total after
Figure captions	9 point	(Times font preferred)	Left justified; below figure	Arabic numerals; [1, 2, 3, etc.]	10 pt total after
Labels in figures	Must be legible!!	Helvetica or Geneva font			

emulate hand drawing.

Photographs should have a glossy finish (not a half tone). Black and white photographs are preferred, but color is acceptable if the contrast is sufficient to reproduce well when printed in black and white.

If your figures are prepared separately from the text, they must each be securely attached to your manuscript in the appropriate places.

V. Bibliographic References

All bibliographical references should be numbered in sequence as they appear in the paper. They are to be listed at the end of the paper in the References section. Examples of correct format for several types of references are at the end of this document [1], [2], [3]. When referring to a reference in the text, place the corresponding reference number in square brackets as illustrated in the previous sentence.

VI. Equation Numbers

Each equation must be in a separate line and must be accompanied by a sequential equation number enclosed, in parentheses (1) which is flush with the right-hand margin of the column. For example:

$$A_O = \frac{g_{m1} r_0}{1 + g_{m2} r_0} \tag{1}$$

VII. Page Numbers

It is preferred that authors not number the pages of their manuscript. If you do, number them lightly in blue pencil on the bottom or back side of each page. DO NOT print page numbers on your manuscript!

VIII. Additional Information

An IEEE publication that presents additional information to authors is available [4]. [Note that certain parts of that publication are not applicable to camera-ready manuscripts (*e.g.*, Section V.)]

A. Symbols and Acronyms

Appendix I of the reference mentioned above [4] also includes lists of preferred unit symbols (*e.g.*, A for ampere, etc.) which should be used in your paper.

Remember that many readers are not as close to the subject area as you are; many acronyms will be meaningless to them. Therefore, acronyms special to your field must be defined the first time they are used. Examples include: BER (bit-error rate), VCO (voltage-controlled oscillator), and LBNL (Lawrence Berkeley National Laboratory).

Acronyms that are general to engineering need not be defined (*e.g.*, JFET, ROM, A/D). Further examples are given in

Appendix II of the reference [4].

B. Last Page of Manuscript

If there is more than a small amount of text, figures, etc. on the last page of the manuscript, it is preferred that this information be roughly divided in half with the first half put at the top of the left column and the second half put at the top of the right column as is the case with this page.

C. Alignment of Columns on a Page

Columns on a page should start at the same height and should be as close to the same length on a page as is practical. For example, the space before the subsection heading, C. Format of Title of Paper and Authors' Names, on the second page of this document has been removed such that this subsection differs from it's style definition thus allowing the right column to begin at the same height as the left column. Likewise spaces before this page's top left subsection heading and top right section heading have also been removed so that the columns not only start at the same height but at the specified margin 0.75 in (1.9 cm) from the top of the page. Columns should end at or near the specified bottom margin of 0.75 in (1.9 cm).

IX. Acknowledgments

This section is normally used to acknowledge contributors to the work who are not listed as authors of your paper, or to acknowledge funding agencies.

X. References

[1] J.Q.Author "Title of the article," *Journal Name, vol. X, June 1988* pp. 23-25

[2] A.B.Author "Title of the Book," *New York: IEEE Press, 1987* pp. 1-20.

[3] Such and such an instrument is manufactured by Ajax Electronics Co., 1000 Main St., Lafayette, CA 94549.

[4] "Information for IEEE Transactions, Journals, and Letters Authors," Revised: 1995. Available from IEEE Transactions/Journals Dept., 445 Hoes Lane, Piscataway, NJ 08855.

If further information on the formatting of manuscripts for Conference Records is needed, contact the Conference Editor for the particular conference in question. Conference Editors for the NSS, MIC and RTC are as follows:

Nuclear Science Symposium (NSS):

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A number of files of useful publishing information for authors is available and a current review status of NSS papers is available via the World Wide Web at:

URL: http://www-tns.fnal.gov/ieee_tns/

The publishing information includes directions for setting certain word processors, such as Microsoft Word, Word Perfect and LaTeX, to achieve this format. Also available are source files for this document in Microsoft Word and LaTeX.

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