IEEE Power Engineering Society

Publication Guide

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Part 4: Example of Formatted Technical Work Prepared for the IEEE Power Engineering Society

On the following pages is an example of a formatted paper which follows the guidelines set forth in Parts 2 and 3 of this Guide. Please refer to those sections of the Guide for specifics and details.

Preparation of Papers and Session Summaries in a Two-Column Format for the IEEE Power Engineering Society

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Abstract: Instructions providing basic guidelines for preparing camera- ready (CR) Conference Proceedings papers for IEEE Power Engineer- ing Society are presented. This document is itself an example of the desired layout for CR papers (inclusive of this abstract). The document contains information regarding desktop publishing format, type sizes, and typefaces. Style rules are provided that explain how to handle equations, units, figures, tables, references, abbreviations, and acro- nyms. Sections are also devoted to the preparation of acknowledgments, references, and authors' biographies. Abstracts are limited to 150 words and can not contain equations, figures, or tables.

Keywords: The author shall select up to 10 keywords to help identify the major topics of the paper. A thesaurus of IEEE indexing keywords is available in print form or as an ASCII file from IEEE Indexing.

I. INTRODUCTION

This document provides an example of the desired layout and contains information regarding desktop publishing format, type sizes, and typefaces. For additional information, please refer to additional sections of the IEEE Power Engineering Society Publication Guide. The guide is included with the PES Author's Kit and may be obtained from the PES web site (www.ieee.org/power), the PES Executive Office: IEEE PES Executive Office, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, U.S.A., phone: 732-562-3883, fax: 732-562- 3881, e-mail: pes@ieee.org. The PES Author's Kit also contains a Technical Paper Submission Cover Sheet packet and an IEEE Copyright form.

A. Preparation

Prepare your paper in full-size format, on paper 21.6 x 27.9 centimeters (8.5 x II inches or 51 x 66 picas). It should be output on a printer (e.g., laser or laser jet printer) having 300 dots per inch or higher resolution, or the equivalent. Lesser quality printers, such as dot matrix printers, are not acceptable.

1) Typefaces and Sizes: Please use a proportional serif typeface such as Times Roman or Times New Roman. The following table provides samples of the appropriate type size and style to use when formatting your PES paper:

Table 1.

Samples of Times Roman Type Sizes and Styles used for Formatting PES Technical Works		
Point Size	Purpose in Paper	Special Appearance
8	Author affiliation, all captions, table text, figure text, footnotes, subscripts, superscripts, references, biographies	
9	Abstract, keywords	
10	Body text, equations	Subheading SECTION TITLES
11	Author Name	
24		**Title**

2) Format: In formatting your original 21.6 x 27.9 centimeter (8.5 x 11 inch) page, set top and bottom margins to 21 millimeters (0.8 inch or 5 picas) and left and right margins to about 18 millimeters (0.7 inch or 4 picas). Do not violate margins (i.e., text, tables, figures, and equations may not extend into the margins). The column width is 89 millimeters (3.5 inches or 21 picas). The space between the two columns is 5 millimeters (0.2 inch or I pica). Paragraph indentation is about 3.5 millimeters (0.14 inch or I pica). Left- and right-justify your columns. Cut A4 papers to 28 centimeters. Use either one or two spaces between sections, and between text and tables or figures, to adjust the column length. On the last page of your paper, try to adjust the lengths of the two columns so that they are the same. Use automatic hyphenation and check spelling. Either digitize or paste down your figures; do not use tape.

II. UNITS

Metric units are preferred for use in IEEE publications in light of their global readership and the inherent convenience of these units in many fields. In particular, the use of the

International System of Units (Systeme Internationale d'Unites or SI Units) is advocated. This system includes a subsystem of units based on the meter, kilogram, second, and ampere (MKSA). British units may be used as secondary units (in parentheses). An exception is when British units are used as identifiers in trade, such as, 3.5-inch disk drive.

III. ADDITIONAL REQUIREMENTS

A. Figures and Tables

Large figures and tables may span across both columns, but may not extend into the page margins. Figure captions should be below the figures; table captions should be above the tables. Avoid placing figures and tables before their fIrst mention in the text. Use the abbreviation "Fig. I," even at the beginning of a sentence.

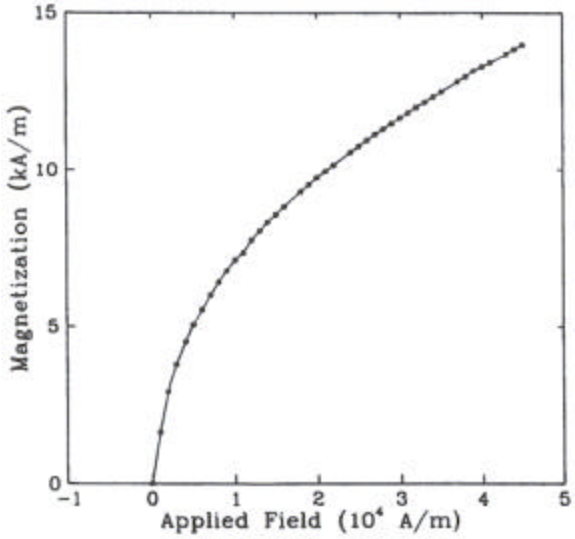


Fig. 1. Magnetization as a function of applied field.
Note how the caption is centered in the column

Figure axis labels are often a source of confusion. Try to use words rather than symbols. As an example, write the quantity "Magnetization," or "Magnetization, M," not just "M." Put units in parentheses. Do not label axes only with units. In the example, write "Magnetization *(*A/m*)"* or "Magnetization (A.m^{-i})," not just "A/m". Do not label axes with a ratio of quantities and units. For example, write "Temperature (K)," not "Temperature/K."

B. Numbering

Number reference citations consecutively in square brackets [1]. The sentence punctuation follows the brackets [2]. Refer simply to the reference number, as in [3]. Do not use "Ref. [3]" or "reference [3]".

Number footnotes separately in superscripts.[1] Place the actual footnote at the bottom of the column in which it is cited. Do not put footnotes in the reference list. Use letters for table footnotes (see Table I).

C. Abbreviations and Acronyms

Define less common abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, ac, dc, and rms do not have to be defined. Do not use abbreviations in the title unless they are unavoidable.

D. Equations

Number equations consecutively with equation numbers in parentheses flush with the right margin, as in (1). To make your equations more compact, you may use the solidus (/), the exp function, or appropriate exponents. Italicize Roman symbols for quantities and variables, but not Greek symbols. Use a long dash rather than a hyphen for a minus sign. Use parentheses to avoid ambiguities in denominators. Punctuate equations with commas or periods when they are part of a sentence.

$$I_f = I_b = -I_c = a^2 I_{a1} - a I_{a2} - I_{a0} = \frac{-j\sqrt{3}E_a}{Z_1 + Z_2} \quad . \qquad (1)$$

where I_F is the fault current at the terminals of an unloaded wye connected generator, for a line-to-line fault using positive, negative and zero sequence voltages, currents, and impedances.

Be sure that the symbols in your equation have been defined before the equation appears or immediately following. Use "(I)," not "Eq. (I)" or "equation (I)," except at the beginning of a sentence: "Equation (I) is ..."

IV. ACKNOWLEDGMENTS

The authors gratefully acknowledge the contributions of Ian X. Austan, Ann H. Burgmeyer, CJ. Essel, and S. Harold Gold for their work on the original version of this document.

V. REFERENCES

References are important to the reader; therefore, each citation must be complete and correct. There is no editorial check on references, therefore an incomplete or wrong reference will be published unless caught by a reviewer or discusser and will detract from the authority and value of the paper. References should be commonly available publications. Readily available references to books and papers by authors other than the author are encouraged.

For a paper citation:

[I] J.F. Fuller, E.F. Fuchs, and K.J. Roesler, "Influence of harmonics on power distribution system protection," IEEE Trans. Power Delivery, vol. 3, no.2, April 1988, pp. 549-557.

For a book citation:

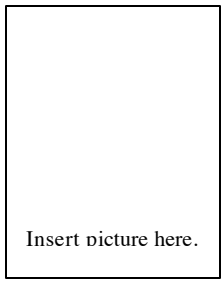
[2] E. Clarke, Circuit Analysis of AC Power Systems, Volume I. New York Wiley, 1950, p. 81.

For a conference citation:

[3] J.L. Alqueres and J.C. Praca, "The Brazilian power system and the challenge of the Amazon transmission," Proceedings of the 1991 Power Engineering Society Transmission and Distribution Conference, 91 CH3-070-0, pp. 315-320.

VI. BIOGRAPHIES

A technical biography for each author must be included. A photograph should also be included for each author, and it should be black and white, glossy, and 3.0 centimeters (1.25 inches) wide by 4.5 centimeters (1.75 inches) high. The head and shoulders should be centered, and the photo should be placed flush with the left margin. The biographies and photographs should appear at the end of the paper, and the space required is included in the six page limit.



Nikola Tesla (M' 1888, F 17) was born in Smiljan, Yugoslavia, on July 9, 1856. He graduated from the Austrian Polytechnic School, Graz, and studied at the University of Prague. His employment experience included the American Telephone Company, Budapest, the Edison Machine Works, Westinghouse Electric Company, and Nikola Tesla Laboratories. His special fields of interest included high frequency. Tesla received honorary degrees from institutions of higher learning including Columbia University, Yale University, University of Belgrade, and University of Zagreb. He received the Elliott Cresson Medal of the Franklin Institute and the Edison Medal of IEEE. In 1956 the term "tesla" (T) was adopted as the unit of magnetic flux density in the MKSA system. In 1975 the Power Engineering Society established the Nikola Tesla Award in his honor. Tesla died on January 7, 1943.

VII. EDITOR'S NOTE

J.W. Hagge was chair of the PES Technical Council and L.L. Grigsby was chair of the PES Publications Department when the original version of this document was published (January 1, 1993).