

Paper Title

First A. Author¹, Second B. Author^{2,*}, and Third C. Author³

¹First Affiliation, City, State, Country

²Second Affiliation, City, State, Country

³Third Affiliation, City, State, Country

author1@email.br, author2@email.com, author3@email.com

*corresponding author

Abstract—Use 9 point Times New Roman Bold for the abstract. Set your line spacing to be 10 points rather than single space. Indent the first line by 0.125 inches and type the word “Abstract” in 9 point Times New Roman Bold Italic. This should be followed by two spaces, a long dash (option / shift / minus), two spaces, and then the first word of your abstract (as shown above). A more professional look will result if all the spaces are set to a font style of regular rather than bold. Times font is an acceptable substitute for Times New Roman font. After the abstract, you should list a few key words from the IEEE approved “Index Terms” (send email to keywords@ieee.org for the latest list) that describe your paper. The index terms are used by automated IEEE search engines to quickly locate your paper. Typically, you should list about 5 to 7 key words, in alphabetical order, using 9 point Times New Roman Bold font. An example is shown next. **DO NOT USE SPECIAL CHARACTERS, SYMBOLS, OR MATH IN YOUR TITLE OR ABSTRACT.**

Keywords—*Ceramics; coaxial resonators; delay filters; delay-lines; power amplifiers*

I. INTRODUCTION (HEADING 1)

Please read through this entire template before you start using it to create your paper! This will save you and the MTT considerable time, and improve your chances for acceptance. The following information is provided to help you prepare the Initial Submission as well as the Final Paper for submission to IMS2014. (Many authors submit the same exact paper for the initial as well as the final submission. This is a common practice. See item #4 below.) A contributor should remember that:

- 1) Deadlines are *absolute*, don’t even ask!
- 2) Summaries may not exceed *three pages*, including all figures, tables, references, etc. Additionally, there is a size limit on the electronic version of all Summaries. In Adobe Portable Document Format (PDF), submissions may not exceed **2 Megabytes**.
- 3) Acceptance rates have historically run at slightly over 50%. There is not sufficient room within the Technical Program to accept all submissions.
- 4) Many submitters with previous IMS experience realize that, if their submission is accepted, they will be required to submit a version of their Final Paper to be published in the Symposium Digest. As the Digest paper will be similar in length to the Summary, many contributors opt to prepare their Summary in the format required for the Digest. This template contains the instructions for the proper preparation of such a

document.

- 5) You should employ this format. This document is being made available as a template for your convenience. If you elect not to use this template, please remember that you must still adhere to the general guidelines embodied in this document concerning, but not limited to, font size, margin size, page limits, file size, etc.

II. OVERVIEW OF THE DIGEST FORMAT

All paragraphs of text, including the abstract, figure captions, and references, should be justified at the left *and the right* edges.

For the Title use 18-point Times (Roman) font. Its paragraph description should be set so that the line spacing is single with 6-point spacing before and 6-point spacing after (Format → Paragraph → Indents and Spacing). The font description for the Author List and Authors’ Affiliation(s) should be 12-point Times. The paragraph descriptions should be set so that the line spacing is single with 6-point spacings before and after. Use an additional line spacing of 12 points before the beginning of the double column section, as shown above.

III. DETAILED TEXT FORMATTING

Using 8.5 x 11-inch paper, the top and bottom margins are 1.125 inches, and the left and right margins are 0.85 inches. Except for Title, Authors and Affiliations, use a double column format. The column width is 3.275 inches and the column spacing is 0.25 inch.

Each major section begins with a Heading in 10 point Times font centered within the column and numbered using Roman numerals (except for ACKNOWLEDGMENT and REFERENCES), followed by a period, a single space, and the title using an initial capital letter for each word. The remaining letters are in SMALL CAPITALS. The paragraph description of the section heading line should be set for 18 points before, 6 points after, and the line spacing should be set to exactly 12 points.

For the body of your paper, use 10-point Times font and set your line spacing at “exactly 12 points” with 0 points before and after. Indent each paragraph by 0.125 inches.

Further details are provided in the remainder of this paper for specific situations.

Table 1. Summary of Typographical Settings

Section	Font Specifics (Times Roman unless specified)			Paragraph Description				
	style	size	special	spacing (in points) line	before	after	alignment	indent (in inches)
Title	plain	18	none	single	6	6	centered	none
Author List	plain	12	mpme	single	6	6	centered	none
Affiliations	plain	12	none	single	6	6	centered	none
Abstract	bold	9	none	exactly 10	0	0	justified	0.125 1 st line
Headings	plain	10	small caps	exactly 12	18	6	centered	none
Subheadings	italic	10	none	exactly 12	6	6	left	none
Body	plain	10	none	exactly 12	0	0	justified	0.125 1 st line
Paragraphs								
Equations	Symbol font for special characters			single	6	6	centered	none
Figures	6 to 9 point sans serif (Helvetica)			single	0	0	centered	none
Figure Captions	plain	9	none	10	0	0	justified	none, tab at 0.5
References	plain	9	none	10	0	0	justified	0.25 hanging

A. Major Subsections (Heading 2)

As shown, denote subsections with left justified 10-point Times Italic. Order them with capitalized alphabetic characters (A, B, . . .). Follow the letter designation with a period, a single space, and then the subsection title capitalizing the first letter of each word. The paragraph description of the subsection heading is set to “exactly 12-point” line spacing with 6 points before and after.

B. Equations

Equations should be centered in the column and numbered sequentially. Place the equation number to the right of the equation within a parenthesis, with right justification within its column. An example would be

$$\oint \mathbf{E} \cdot d\mathbf{L} = -\frac{\partial}{\partial t} \iint \mathbf{B} \cdot d\mathbf{S} \quad (1)$$

or

$$\nabla \times \mathbf{H} = \mathbf{J} + \frac{\partial \mathbf{D}}{\partial t}. \quad (2)$$

Note that a period is used to properly punctuate the previous sentence. It is placed at the end of the second equation. *Make sure that any subscripts in your equations are legible and are not too small to read!* When referring to an equation, use the number within parenthesis. For example, you would usually refer to the second equation as (2) rather than equation (2). If possible, use the Symbol font for all special characters. The paragraph description of the line containing the equation should be set for 6 points before and 6 points after. The paragraph spacing will need to be set to “single” rather than “exactly 12 point” so that the height will autoscale to fit the equation.

IV. FIGURES

Most of the following applies to Microsoft Word. Figures should utilize as much of the column width as possible in order to maximize legibility. Use a sans serif font, such as Helvetica. Helvetica is larger and much easier to read than Times. Using 8- to 10-point Helvetica usually results in a legible figure. *Do not use any font smaller than 8-point!* It must be legible. When referring to a figure, use the abbreviation Figure followed by its number. Place figure captions directly below each figure. Use 9-point Times with the paragraph spacing set at “exactly

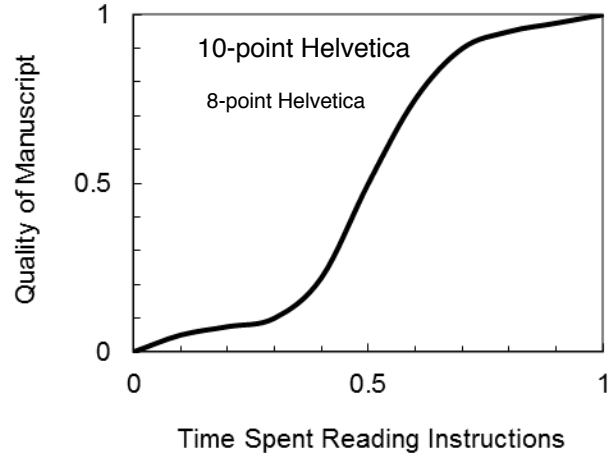


Figure 1. Estimated relationship between the time an author spends reading these instructions and the quality of the author's digest article

10 points.” Set a tab at 0.5 inch. Type “Figure #.” (# is the numeral) then tab over to the 0.5 inch mark before beginning the text of the figure caption. Note that figure captions are always (left and right) justified, rather than centered, even if they are less than a single full line in length. See the caption for Figure 1.

Within L^AT_EX there is basically only one option for placing figures within your paper. Often the easiest way is to insert them into the top of the next column. Do not lump all figures at the end of the paper! If you have difficulties with the titles on your figures, you can always elect to add in the titles as separate text boxes, rather than importing the titles with the graph. This is sometimes helpful in getting a lengthy vertically-oriented title to display correctly.

Notice that prior to the graph, a single 12-point line is used to separate the preceding text from the graph. The equivalent of a blank line should exist between the bottom of the graph (the x-axis caption) and the figure caption. (In this particular case, there was no need to add a blank line between the x-axis label and the figure caption, because there was already adequate spacing provided by the image border.) After the figure caption, there should be a single 12-point blank line

before the text resumes. \LaTeX accepts encapsulated post script files as figures. Standard post script figures will not expand and contract to fill the designate area on the page. Encapsulated post script files will. Thus, encapsulated post script files must obviously be only one page long. It is often easy to convert a post script file to encapsulated post script. In Linux this can be done with the command, “ps2epsi.” If you decide to use color traces in your graphical data, be absolutely certain that there is no ambiguity about your graphical information when printed on a B&W printer. Here is a common example of what can go wrong with the numbering and sizing of axis titles on a graph. In this case, the graph was initially pasted at a much larger size than the column width, and then reduced to fit:

Table 1 on the second page was inserted using “Insert”, “Text Box”, creating the text contained in Table 1, and then formatting the text box using all the settings available under “Format”, “Text Box...”. Table 1 also serves as an illustration of one of the rare instances when the double column format requirement can be violated. Certain figures and tables will require the full-page width to display. It is usually best to place these figures and tables at the top, rather than in the middle or bottom of a page. Tables should be entered within a single column if this can be done cleanly, without the entry becoming too crowded.

V. CITING PREVIOUS WORK

References in the REFERENCES section should be listed based on the order of their appearance in the paper. When referencing a journal article [1], a conference digest article [2] or a book [3], place the reference numbers within square brackets. To simultaneously cite these references [1][2][3] use the format just demonstrated. The reference list is the last section and references are listed in the order cited. Use 9 point Times. The paragraph description is set for a line spacing of exactly 10 points with 0 point spacing before and after. A 0.25 inch hanging indentation should be specified. Generally speaking, references should be very detailed. For journal articles, list all authors by initials and last name, the title of the paper in quotations (capitalizing only the first letter of the first word, unless it would be capitalized in a sentence, e.g., a proper noun), the journal name in italics, the volume number, the issue number, the page numbers, and the date. Use the examples provided [1][2][3] as a guide.

For the double-blind submission, citations of the authors’ own work should be worded in a way that avoids identifying any connection to the authors. Simply note your prior work in the same way as work by other authors. For example, **do not write**, “We (or the authors) demonstrated in [x] that...” Rather write, “It was demonstrated in [x] that...”

VI. CREATION OF THE PDF FILE

Your final submission must be IEEE Xplore Compatible, or your paper will be rejected. The IEEE PDF eXpress web site used for IMS2014 will be available to aid you in this process. IEEE PDF eXpress is an online tool that converts your document into a PDF format that complies with IEEE Xplore® standards. Authors should check the IMS2014 web site (<http://ims2014.org>) for the most up-to-date instructions. As always with a conversion to PDF, authors should *very carefully* check a printed copy.

VII. CONCLUSION

Following these instructions will improve the quality of your paper and the IMS Digest. If you have comments, please contact one of the Steering Committee editors.

ACKNOWLEDGMENT

For the Summary paper submission only, no acknowledgements are allowed.

REFERENCES

- [1] W. H. Cantrell, “Tuning analysis for the high-Q class-E power amplifier,” *IEEE Trans. Microwave Theory & Tech.*, vol. 48, no. 12, pp. 2397-2402, December 2000.
- [2] W. H. Cantrell, and W. A. Davis, “Amplitude modulator utilizing a high-Q class-E DC-DC converter”, *2003 IEEE MTT-S Int. Microwave Symp. Dig.*, vol. 3, pp. 1721-1724, June 2003.
- [3] H. L. Krauss, C. W. Bostian, and F. H. Raab, *Solid State Radio Engineering*, New York: J. Wiley & Sons, 1980.

Note: For the Summary paper submission only, references to the authors own work should be cited as if done by others to enable a double-blind review. **Citations must be complete and not redacted, allowing the reviewers to confirm that prior art has been properly identified and acknowledged.**