

# Conference Paper Title

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**Abstract**—This document is a model and instructions for L<sup>A</sup>T<sub>E</sub>X. This and the IEEEtran.cls file define the components of your paper [title, text, heads, etc.]. Do Not Use Symbols, Special Characters, Footnotes, or Math in Paper Title or Abstract. Sub-titles are not captured in Xplore and should not be used in the Paper Title.

**Index Terms**—component, formatting, style, styling, insert

## I. INTRODUCTION

This document is a model and instructions for L<sup>A</sup>T<sub>E</sub>X. Please observe the conference page limit of 4 pages + an additional (optional) 5th page for references only.

## II. EASE OF USE

### A. Maintaining the Integrity of the Specifications

The IEEEtran class file is used to format your paper and style the text. All margins, column widths, line spaces, and text fonts are prescribed; please do not alter them. You may note peculiarities. For example, the head margin measures proportionately more than is customary. This measurement and others are deliberate, using specifications that anticipate your paper as one part of the entire proceedings, and not as an independent document. Please do not revise any of the current designations.

## III. PREPARE YOUR PAPER

Complete all content and organizational editing before formatting. Please note sections III-A–III-D below for more information on proofreading, spelling and grammar.

### A. Abbreviations and Acronyms

Define 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 or heads unless they are unavoidable.

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Identify applicable funding agency here. If none, delete this.

### B. Units

- Use SI units. English units may be used as secondary units (in parentheses). An exception would be the use of English units as identifiers in trade, such as “3.5-inch disk drive”.
- Do not mix complete spellings and abbreviations of units: “Wb/m<sup>2</sup>” or “webers per square meter”, not “webers/m<sup>2</sup>”. Spell out units when they appear in text: “. . . a few henries”, not “. . . a few H”.
- Use a zero before decimal points: “0.25”, not “.25”. Use “cm<sup>3</sup>”, not “cc”.)

### C. Equations

Number equations consecutively. 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. Punctuate equations with commas or periods when they are part of a sentence, as in:

$$a + b = \gamma . \tag{1}$$

Be sure that the symbols in your equation have been defined before or immediately following the equation. Use “(1)”, not “Eq. (1)” or “equation (1)”, except at the beginning of a sentence: “Equation (1) is . . .”

Please use “soft” (e.g., `\eqref{Eq}`) cross references instead of “hard” references (e.g., (1)). That will make it possible to combine sections, add equations, or change the order of figures or citations without having to go through the file line by line.

Please don’t use the `{eqnarray}` equation environment. Use `{align}` or `{IEEEeqnarray}` instead. The `{eqnarray}` environment leaves unsightly spaces around relation symbols.

Please note that the `{subequations}` environment in L<sup>A</sup>T<sub>E</sub>X will increment the main equation counter even when there are no equation numbers displayed. If you forget that, you might write an article in which the equation numbers skip from (17) to (20), causing the copy editors to wonder if you’ve discovered a new method of counting.

Do not use `\nonumber` inside the `{array}` environment. It will not stop equation numbers inside `{array}` (there won’t be any anyway) and it might stop a wanted equation number in the surrounding equation.

### D. Some Common Mistakes

- The word “data” is plural, not singular.

- The subscript for the permeability of vacuum  $\mu_0$ , and other common scientific constants, is zero with subscript formatting, not a lowercase letter “o”.
- In American English, commas, semicolons, periods, question and exclamation marks are located within quotation marks only when a complete thought or name is cited, such as a title or full quotation. When quotation marks are used, instead of a bold or italic typeface, to highlight a word or phrase, punctuation should appear outside of the quotation marks. A parenthetical phrase or statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within the parentheses.)
- A graph within a graph is an “inset”, not an “insert”.
- The word *alternatively* is preferred to the word “alternately” (unless you really mean something that alternates).
- Do not use the word “essentially” to mean “approximately” or “effectively”.
- In your paper title, if the words “that uses” can accurately replace the word “using”, capitalize the “u”; if not, keep using lower-cased.
- Be aware of the different meanings of the homophones “affect” and “effect”, “complement” and “compliment”, “discreet” and “discrete”, “principal” and “principle”.
- Do not confuse “imply” and “infer”.
- The prefix “non” is not a word; it should be joined to the word it modifies, usually without a hyphen.
- There is no period after the “et” in the Latin abbreviation “et al.”.
- The abbreviation “i.e.” means “that is”, and the abbreviation “e.g.” means “for example”.

### E. Authors and Affiliations

A minimum of one author is required for all conference articles. Do not list any (AI) tools that helped writing the paper as co-authors, you can include them in the Acknowledgment.

### F. Identify the Headings

Headings, or heads, are organizational devices that guide the reader through your paper. There are two types: component heads and text heads.

Component heads identify the different components of your paper and are not typically subordinate to each other. Examples include Acknowledgments and References and, for these.

Text heads organize the topics on a relational, hierarchical basis. For example, the paper title is the primary text head because all subsequent material relates and elaborates on this one topic. Do not number text heads— $\LaTeX$  will do that for you. Each topic should be defined via `\section`. If there are two or more sub-topics, the next level head `\subsection` should be used. For deeper nesting you can use `\paragraph` at the start of the paragraph. If there are not at least two sub-topics, then no subheads should be introduced.

### G. Labels

If you assign the same label to a subsection and a table, you might find that Table I has been cross referenced as Table IV-B3. If you put a `\label` command before the command that updates the counter it’s supposed to be using, the label will pick up the last counter to be cross referenced instead. In particular, a `\label` command should not go before the caption of a figure or a table.

### H. Figures and Tables

*a) Positioning Figures and Tables:* Place figures and tables at the top and bottom of columns. Avoid placing them in the middle of columns. Large figures and tables may span across both columns. You can do this by adding a `*` to the environments, i.e. `figure*` and `table*`. Figure captions should be below the figures; table heads

TABLE I  
TABLE TYPE STYLES

Table Head	Table Column Head		
	Table column subhead	Subhead	Subhead
copy	More table copy <sup>a</sup>		

<sup>a</sup> Example of a Table footnote.

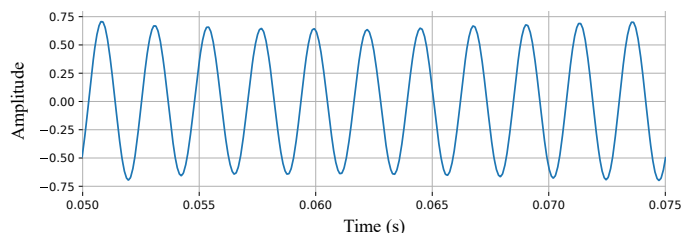


Fig. 1. Example of a figure caption.

should appear above the tables. Insert figures and tables after they are cited in the text. Reference tables using “Table I”. Reference figures using the abbreviation “Fig. 1”, even at the beginning of a sentence.

Figure graphics: Prefer including vector files, e.g. in `pdf` format, to including rasterized files, e.g. `png`. This will preserve image quality when zoomed, and can reduce filesize. Avoid vector files if their complexity hinders rendering speed when viewing the paper.

Figure Labels: Use 8 point Times New Roman for Figure labels. Use words rather than symbols or abbreviations when writing Figure axis labels to avoid confusing the reader. As an example, write the quantity “Magnetization”, or “Magnetization, M”, not just “M”. If including units in the label, present them within parentheses. Do not label axes only with units. In the example, write “Magnetization (A/m)” or “Magnetization {A[m(1)]}”, not just “A/m”. Do not label axes with a ratio of quantities and units. For example, write “Temperature (K)”, not “Temperature/K”.

### ACKNOWLEDGMENT

The preferred spelling of the word “acknowledgment” in America is without an “e” after the “g”. Avoid the stilted expression “one of us (R. B. G.) thanks . . .”. Instead, try “R. B. G. thanks . . .”. You can list any (AI) tools that helped with writing the paper in this section. Put sponsor acknowledgments in the unnumbered footnote on the first page.

### REFERENCES

Citations are numbered consecutively within brackets [1]. The sentence punctuation follows the bracket [2]. Refer simply to the reference number, as in [3]—do not use “Ref. [4]” or “reference [5]” except at the beginning of a sentence: “Reference [6] was the first . . .”

Number footnotes separately in superscripts.<sup>1</sup> Place the actual footnote at the bottom of the column in which it was cited. Do not put footnotes in the abstract or reference list. Use letters for table footnotes, as in Table I.

Unless there are six authors or more give all authors’ names; do not use “et al.” [7]. Papers that have not been published, even if they have been submitted for publication, should be cited as “unpublished” [8]. Papers that have been accepted for publication should be cited as “in press”. Capitalize only the first word in a paper title, except for proper nouns and element symbols [9]. Enclose all abbreviations and text that needs to be capitalized in your `bib` file using `{}`, e.g. `title = "Advanced {QoS} Services"`.

<sup>1</sup>Example footnote.

For papers published in translation journals, please give the English citation first, followed by the original foreign-language citation.

To balance the last page columns you can use the `pbalance` package. It might need for the document to be compiled several times to work. In case of suboptimal results please check the manual. There are other packages that you can try as well, e.g. `balance` and `flushend`.

#### REFERENCES

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