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| --- |
| Full Paper Title |
| Author Name*Affiliation*author@email.com | Author Name*Affiliation*author@email.com | Author Name*Affiliation*author@email.com |

Abstract - The Abstract and Index Terms text should be 10 point Times New Roman, bold italic, fully justified, and contained within one paragraph each. Begin the Abstract with the word “Abstract.” Do not indent. Use a hyphen, not a long dash, after the word “Abstract.” The Abstract should be about 150 - 200 words. Avoid using abbreviations. Do not cite references in the Abstract. Leave a blank line between the Abstract and Index Terms.

Index Terms - About four key words or phrases, in alphabetical order, separated by commas, with only the first index term capitalized. All terms following the initial term should be lowercase unless they are proper nouns, in which case they should have an initial cap.

# Introduction

These instructions serve as a template for Microsoft Word and give you the basic guidelines for preparing papers for ProComm 2019, July 23 - 26, in Aachen, Germany. The Proceedings template has been revised for consistency with IEEE’s General Proceedings Template; thus, you may notice some differences from papers you have prepared in previous years.

Please enable “Show Comments” and carefully follow these instructions to ensure legibility and uniformity.

# Page Layout

When you open these guidelines, select "Print Layout" from the "View" menu (View> Print Layout), which will allow you to see the two-column format. You may then type over sections by using the copy and paste commands listed under the Edit menu (Edit> Paste) into this document and/or by using the markup styles. **We suggest you use this document as your guide and simply copy and paste your text over the material in this document.**

All printed material, including text, illustrations, and charts, must be kept within a print area of 6-7/8 inches (17.5 cm) wide by 8-7/8 inches (22.54 cm) high. Do not write or print anything outside the print area. All text must be in a two-column format. Columns are to be 3-1/4 inches (8.25 cm) wide, with a 5/16 inch (0.8 cm) space between them. Text must be fully justified, with the body of the paper in Times New Roman 10pt font.

Because the Proceedings will be provided in a digital format, color may be used in the paper, but try to use colors that contrast well in black and white.

Do not number the pages; all papers will be merged for the purpose of creating the Proceedings, and page numbering will be applied at that time.

Most full papers are around six pages in length. The maximum length is eight pages, which includes references and all figures and/or tables.

## I. Main title

The main title (on the first page) should begin 1 inch (2.54 cm) from the top edge of the page. It should be centered, in Times 24-point type. Capitalize the first letter of nouns, pronouns, verbs, adjectives, and adverbs; do not capitalize articles, coordinate conjunctions, or prepositions (unless the title begins with such a word).

## II. Author name(s) and affiliation(s)

This section should include identifying information only when the final camera-ready document is submitted.

Author names and affiliations are to be centered beneath the title and printed in Times 12-point, non-boldface type. Multiple authors may be shown in a two- or three-column format, with their affiliations below their respective names. If only one author, center the information; if two authors, use the left and right cells; three authors are shown above; if more than three, create a new row and format appropriately, leaving one blank line between rows of authors. Affiliations are centered below each author name, italicized, not bold. Include e‑mail addresses.

## III. Second and following pages

The second and following pages should begin 1.0 inch (2.54 cm) from the top edge. On all pages, the bottom margin should be 1-1/8 inches (2.86 cm) from the bottom edge of the page for 8.5 x 11-inch paper (US Letter size).

On the last page of your paper, try to adjust the lengths of the two columns so that they are the same (automatically defined in section of this template). Use automatic hyphenation and check spelling. Do the best that you can.

# Typeface, fonts, and alignment

Wherever Times is specified, Times Roman or New Times Roman may be used.

## I. Main text

Type your main text in 10-point Times, single-spaced. Do not use double-spacing. All paragraphs should be indented 1 pica (approximately 1/6- or 0.17-inch or 0.422 cm). Be sure your text is fully justified—that is, flush left and flush right at the same time. Sentences should be separated by one space only. Do not place any additional blank lines between paragraphs. Apply Body Text Indent style. Do not modify the styles used in this template.

##  II. Figures and tables

Figure and table captions should be 10-point Times, small caps, left-justified (“Caption” in the Styles menu of this document). Initially capitalize only the first word of each figure caption and table title. Figures and tables must be numbered separately. For example: “Figure 1. Database contexts,” “Table 1. Input data.” If a figure or table was not originated by the author, credit must be given to the source in 9-point Times, left-justified type (“Source” in the Styles menu of this document). Leave 1 point of space between the figure or table and the source credit, and 6 points of space after the source credit. Callouts should be 9-point Times, non-boldface.

Large figures and tables may span across both columns. Avoid placing figures and tables before their first mention in the text. Use .PNG or .JPEG formatting for embedded figures and images.

Figure captions are to appear below the figures. For figures, be sure to include a label (Figure X), a title (a short non-sentence description), and a caption (which explains in full sentences the meaning, purpose, or ways of decoding the figure). Of course, cite your figure, too, if it is taken from another source. See example with Figure 1 in this template.

Table titles are to appear above the tables. Table copy is identical to copy in the main text: 10-point Times New Roman (“Normal” in the Styles menu of this document). Table heads (and subheads if needed) use 10-point Times New Roman in boldface (“Table Head” in the Styles menu of this document).

Leave 6 points of space between the table title and the table itself, and 6 points of space after the table. Leave 6 points of space between the text above the figure and 6 points of space after the figure caption. Apply “Caption” style.

Table 1. Table type styles.

| Table Head | Table Column Head |
| --- | --- |
| Table column subhead | Subhead | Subhead |
| Table copy | More table copy |  |  |

Figure axis labels are often a source of confusion. Try to use words rather than symbols. As an example, write the quantity “Time” or “Time, t” not just “t.” Put units in 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.”

Multipliers can be especially confusing. Write “Magnetization (kA/m)” or “Magnetization (103 A/m).” Do not write “Magnetization (A/m) x 1000” because the reader would not know whether the top axis label in figure means 15 000 A/m or 0.015 A/m.



Source: Name and/or institution if image is not author’s. (Delete if not used.)

Figure . caption style for describing figures. Please read carefully section II to understand how to format caption work for both figures and tables.

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 an em (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, as in

a + b = c.

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

Use a zero before decimal points: “0.25,” not “.25.” Use “cm3,” not “cc.” Do not mix complete spellings and abbreviations of units: “Wb2/m2” or “webers per square meter,” not “webers/m2.” Spell units when they appear in text: “…a few henries,” not “…a few H.”

**If your native language is not English, please get a native English-speaking colleague to proofread and edit your paper.**

Do not add any kind of pagination anywhere in the paper.

# First-order headings

First-order headings should use Times 10-point small-caps, initially capitalized and centered, with 12 points of space before and 6 points after. This format is set as “Heading 1” in the Styles menu of this document.

## I. Second-order headings

As in this heading, second-order headings should be Times 10-point, initially capitalized and italicized, flush left, with 9 points of space before and 3 points after. This format is set as “Heading 2” in the Styles menu of this document. Sections defined by second-order headings should be numbered with upper-case Roman numerals, as in this document.

# Bullets and Numbered Lists

The recommended format for bulleted lists is as follows:

* The lead-in sentence ends with a colon only if it is a complete sentence or ends with the words “as follows” or “the following.”
* No blank lines should be used between the lead-in sentence and the list items.
* List items (BulletList Style) should be indented 0.5 inches from the left margin and should use rounded bullets (no dashes, hyphens, or other symbols should be used).

For numbered lists you should follow these guidelines:

1. Use where the order of the list is critical (NumberedList Style).
2. Use the auto-numbering feature included in the NumberedList Style.

# Block Quote

If you need to offset text as block quotations of extracts, apply the BlockQuote Style to your paragraph for the correct indentation. You do not need to set quotation marks around the block.

Block Quote: Statements in the block quote will be indented and left justified only to identify the content as different from the body text.

# Footnotes

To help your readers, avoid using footnotes altogether and include necessary peripheral observations in the text (within parentheses, if you prefer, as in this sentence).

# Acknowledgements (Optional)

If you wish to identify funding sources or significant contributions by others, please include your acknowledgements at the end of your paper but before the References. **Only include this information on the final camera-ready copy.**

# References

List and number all references in 9-point Times, single-spaced, at the end of your paper, with one blank line between each reference. This format is set as “References Text” in the Styles menu of this document. The names of authors in your references are formatted as the first initial(s) of the authors followed by their last names. Use *et al.* when three or more names are given, both in the in-text citations and in the References section.

Number references consecutively in the text, and enclose the citation number in square brackets (for example, [1]). The sentence punctuation follows the bracket [2]. When citing a reference in your text, refer simply to the reference number, as in [3]. Do not use “Ref. [3]” or “reference [3]” except at the beginning of a sentence: “Reference [3] was the first….” **Authors who use an alternative reference/citation style will have their papers returned for correction.**

Where appropriate, include the name(s) of editors of referenced books. Do not use ibid. or op. cit references. For detailed information about IEEE proceedings citations, consult the IEEE Style Guide at <http://ieeeauthorcenter.ieee.org/create-your-ieee-article/create-the-text-of-your-article/ieee-editorial-style-manual-2017/>

Examples of references for common types of publications—journal articles, books, and websites follow. You can use these examples to verify your own work. IEEE format is used as in the *Transactions on Professional Communication*, the source of these sample entries. If you need to cite a source that does not fit one of these styles, you may consult the Transactions, or its online submission instructions, for other bibliographic references written in correct IEEE style.

Please note that references should not have active hyperlinks.

### [1] I. Thompson, “Women and feminism in technical communication,” *J. Bus. Tech. Commun.*, vol. 13, no. 2, pp.154–178, 1999.

### [2] M. S. MacNealy*, Strategies for Empirical Research in Writing*. Boston, MA: Allyn and Bacon, 1999.

### [3] J. H. Watt and S. A. van den Berg, *Research Methods for Communication Science*. Boston, MA: Allyn and Bacon, 1995.

### [4] S. Kleinmann, “The reciprocal relationship of workplace culture and review,” in *Writing in the Workplace: New Research Perspectives*, R. Spilka, Ed. Carbondale, IL: Southern Illinois University Press, 1993, pp. 56–70.

### [5] K. St. Amant, “Virtual office communication protocols: A system for managing international virtual teams,” in *Proc. IEEE Int. Professional Commun. Conf.*, 2005, pp. 703–717.

### [6] Structural Engineering Society–International. [Online]. Available: http://www.seaint.org.

### [7] M. Tohidi et al. "Getting the right design and the design right: Testing many is better than one." in *Proc. ACM-SIGCHI Conf. on Human Factors in Computing Syst. (CHI’06)*. 2006, pp. 1243-1252.

# About the Authors

The About the Authors section must begin 12 points below the references section, using the same margins as the body. Describe each author in a separate paragraph, skipping one line between authors. Try to limit the information to 75 words or less, but it is okay to have more.

****Author Name is a Graduate Student at….

Each author name should be bolded. You can apply the AuthorName character style for this. An image is optional (width not to exceed 1-inch or 96 pixels).

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