Preparation of Articles for IEEEP Journal (2023)

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Abstract—**This document provides a guide for preparing articles for IEEEP Journal and Letter. Use this document as a template if you are using Microsoft *Word*. Otherwise, use this as an instruction set. The electronic file of your article will be formatted further at IEEEP. Titles should be written in uppercase and lowercase letters, not all uppercase. Avoid writing long formulas with subscripts in the title; short formulas that identify the elements are fine (e.g., "Nd–Fe–B"). Do not write "(Invited)" in the title. Full names of authors are preferred in the author field but are not required. Put a space between authors' initials. ORCIDs can be provided here as well. In the title, all variables should appear lightface italic; numbers and units will remain bold. Abstracts must be a single paragraph. In order for an Abstract to be effective when displayed in IEEEP as well as through indexing services such as Compendex, INSPEC, Medline, ProQuest, and Web of Science, it must be an accurate, stand-alone reflection of the contents of the article. They shall not contain displayed mathematical equations, numbered reference citations, nor footnotes. They should include three or four different keywords or phrases, as this will help readers to find it. It is important to avoid over-repetition of such phrases as this can result in a page being rejected by search engines. Ensure that your abstract reads well and is grammatically correct.**

Index Terms—**Enter keywords or phrases in alphabetical order, separated by commas. Using the *IEEE Thesaurus* can help you find the best standardized keywords to fit your article.**

I. INTRODUCTION

THIS document is a template for Microsoft *Word*. It is available from https://IEEEPnhrj.org/index.php. This template is a guide to formatting; your proof and final published version may vary in layout and length to conform to IEEEP policy and style. Page count is an estimate; the length of your submitted article in the template may not be the same as when the formal proof is created by IEEEP.

The *IEEE Editorial Style Manual for Authors* is available at https://journals.ieeeauthorcenter.ieee.org/create-your-ieee-journal-article/create-the-text-of-your-article/ieee-editorial-style-manual/. This contains a formal set of editorial guidelines for IEEEP Journal and Letter, including:

- punctuation;
- capitalization;
- abbreviations;
- section headings;
- numbers, equations;
- footnotes;
- biographies;
- some common mistakes;
- units of measurement.

Communicate your work clearly. If you are not fully proficient in English, consider using an English language editing service before submitting your article. An expert editing service can help you refine the use of English in your article, so you can communicate your work more effectively.

II. GUIDELINES FOR MANUSCRIPT PREPARATION

When you open the template, select "Page Layout" from the "View" menu in the menu bar (View | Page Layout), (these instructions assume Microsoft *Word*. Some versions may have
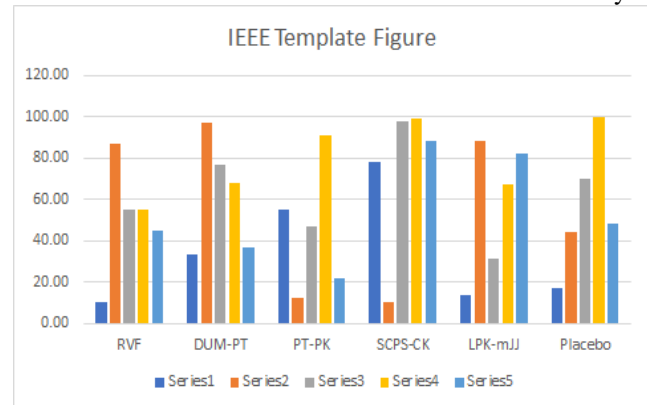

Fig. 1. This is a sample of a figure caption.

alternate ways to access the same functionalities noted here).

The next few paragraphs should contain the authors' current affiliations, including current address and e-mail. For example, First A. Author is with the National Institute of Standards and Technology, Boulder, CO 80305 USA (e-mail: author@ boulder.nist.gov).

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Mentions of supplemental materials and animal/human rights statements can be included here.

For inquiries regarding the submission of your paper on Open Journal System (OJS), please contact info@ieeepnhrj.org or call Mr. Muhammad Irfan (0304-4779923).

Then, type over sections of the template or cut and paste from another document and use markup styles. The pull-down style menu is in the Formatting Toolbar at the top of your *Word* window (e.g., the style at this point in the document is "Text"). Highlight a section that you want to designate with a certain style, and then select the appropriate name on the style menu. The style will adjust your fonts and line spacing. Do not change the font sizes or line spacing to squeeze more text into a limited number of pages. Use *italics* for emphasis; do not underline.

IEEEP will do the final formatting of your article. This is intended as an authoring template, not a final production template. It is not intended to match the final published format. Differences in final formatting are likely in the final IEEEP files. Page count in the template is an estimate. Do not adjust line and character spacing to fit your paper to a specific length.

A. *Abbreviations and Acronyms*

Define abbreviations and acronyms the first time they are used in the text, even after they have already been defined in the abstract. Abbreviations such as IEEEP, SI, ac, and dc do not have to be defined. Abbreviations that incorporate periods should not have spaces: write "C.N.R.S.," not "C. N. R. S." Do not use abbreviations in the title unless they are unavoidable (for example, "IEEEP" in the title of this article).

III. MATH

Use either the Microsoft Equation Editor or the MathType plugin, which can be obtained from https://store.wiris.com/en/products/mathtype/download. For help with formatting and placing equations, refer to the *IEEE Editing Math Guide* at http://journals.ieeeauthorcenter.ieee.org/wp-content/uploads/sites/7/Editing-Mathematics.pdf and the *IEEE MathType Tutorial for Microsoft Word Users* at http://journals.ieeeauthorcenter.ieee.org/wp-content/uploads/sites/7/IEEE-Math-Typesetting-Guide-for-MS-Word-Users.pdf.

TABLE I
THIS IS A SAMPLE OF A TABLE TITLE

Name	#1	#2	#3	#4	#5
RVF	10	87	55	55	45
DUM-PT	33	97	77	68	37
PT-PK	55	12	47	91	22
SCPS-CK	78	10	98	99	88
LPK-mJJ	14	88	31	67	82
Placebo	17	44	70	100	48

A. *Equations*

Number equations consecutively with equation numbers in parentheses flush with the right margin of the column, as in (1). First use the equation editor to create the equation. Then select the "Equation" markup style. Press the tab key and write the equation number in parentheses. To make your equations more compact, you may use the solidus (/), the exp function, or appropriate exponents. Use parentheses to avoid ambiguities in denominators. Punctuate equations when they are part of a sentence, as in

$$B_p + H_2 = 40. \qquad (1)$$

Be sure that the symbols in your equation have been defined before the equation appears or immediately following. Italicize symbols (T might refer to temperature, but T is the unit tesla). When referring to an equation or formula, use simply "(1)," not "Eq. (1)" or "equation (1)," except at the beginning of a sentence: "Equation (1) is ... ."

B. *Algorithms*

Algorithms should be numbered and include a short title. They are set off from the text with rules above and below the title and after the last line.

Algorithm 1 Weighted Tanimoto ELM.

$\text{TRAIN}(\mathbf{XT})$
  select randomly $W \subset \mathbf{X}$
  $N_{\mathbf{t}} \leftarrow |\{i : \mathbf{t}_i = \mathbf{t}\}|$ **for** $\mathbf{t} = -1, +1$
  $B_i \leftarrow \sqrt{\text{MAX}(N_{-1}, N_{+1})/N_{\mathbf{t}_i}}$ **for** $i = 1, ..., N$
  $\hat{\mathbf{H}} \leftarrow B \cdot (\mathbf{X}^T\mathbf{W})/(\not\Vdash\mathbf{X} + \not\Vdash\mathbf{W} - \mathbf{X}^T\mathbf{W})$
  $\beta \leftarrow \left(I/C + \hat{\mathbf{H}}^T\hat{\mathbf{H}}\right)^{-1}(\hat{\mathbf{H}}^T B \cdot \mathbf{T})$
  return $\mathbf{W}, \beta$

$\text{PREDICT}(\mathbf{X})$
  $\mathbf{H} \leftarrow (\mathbf{X}^T\mathbf{W})/(\not\Vdash\mathbf{X} + \not\Vdash\mathbf{W} - \mathbf{X}^T\mathbf{W})$
  return $\text{SIGN}(\mathbf{H}\beta)$

IV. GUIDELINES FOR GRAPHICS PREPARATION AND SUBMISSION

A. *Types of Graphics*

The following list outlines the different types of graphics published in IEEEP journals. They are categorized based on their construction, and use of color / shades of gray:

1) **Color/Grayscale Figures**
   Figures that are meant to appear in color, or shades of black/gray. Such figures may include photographs, illustrations, multicolor graphs, and flowcharts.
2) **Line Art Figures**
   Figures that are composed of only black lines and shapes. These figures should have no shades or half-tones of gray, only black and white.
3) **Tables**
   Data charts which are typically black and white, but sometimes include color.

B. *Multipart Figures*

These are figures compiled of more than one sub-figure presented side-by-side or stacked. If a multipart figure is made up of multiple figure types (one part is line art, and another is grayscale or color), the figure should meet the stricter guidelines.

C. File Formats for Graphics

Format and save your graphics using a suitable graphics processing program that will allow you to create the images as PostScript (PS), Encapsulated PostScript (.EPS), Tagged Image File Format (.TIFF), Portable Document Format (.PDF), JPEG, or Portable Network Graphics (.PNG). These programs can re-size them and adjust the resolution settings. If you created your source files in one of the following programs you will be able to submit the graphics without converting to a PS, EPS, TIFF, PDF, or PNG file: Microsoft Word, Microsoft PowerPoint, or Microsoft Excel. Though it is not required, it is strongly recommended that these files be saved in PDF format rather than DOC, XLS, or PPT. Doing so will protect your figures from common font and arrow stroke issues that occur when working on the files across multiple platforms. When submitting your final files, your graphics should all be submitted individually in one of these formats along with the manuscript.

D. Sizing of Graphics

Most charts, graphs, and tables are one column wide (3.5 inches / 88 mm / 21 picas) or page wide (7.16 inches / 181 millimeters / 43 picas). The maximum depth a graphic can be is 8.5 inches (216 millimeters / 54 picas). When choosing the depth of a graphic, please allow space for a caption. Figures can be sized between column and page widths if the author chooses, however, it is recommended that figures not be sized less than column width unless when necessary.

The final printed size of author photographs is exactly 1 in wide by 1.25 in tall (25.4 mm x 31.75 mm / 6 picas x 7.5 picas). Author photos printed in editorials measure 1.59 in wide by 2 in tall (40 mm x 50 mm / 9.5 picas x 12 picas).

E. Resolution

The proper resolution of your figures will depend on the type of figure it is as defined in the "Types of Figures" section. Author photographs, color, and grayscale figures should be at least 300dpi. Line art, including tables should be a minimum of 600dpi.

F. Vector Art

In order to preserve the figures' integrity across multiple computer platforms, we accept files in the following formats: .EPS/.PDF/.PS. All fonts must be embedded or text converted to outlines in order to achieve the best-quality results.

G. Color Space

The term "color space" refers to the entire sum of colors that can be represented within the said medium. For our purposes, the three main color spaces are grayscale, RGB (red/green/blue), and CMYK (cyan/magenta/yellow/black). RGB is generally used with on-screen graphics, whereas CMYK is used for printing purposes.

All color figures should be generated in RGB or CMYK color space. Grayscale images should be submitted in grayscale color space. Line art may be provided in grayscale OR bitmap colorspace. Note that "bitmap colorspace" and "bitmap file format" are not the same thing. When bitmap color space is selected, .TIF/.TIFF/.PNG are the recommended file formats.

H. Accepted Fonts Within Figures

When preparing your graphics, IEEEP suggests that you use one of the following Open Type fonts: Times New Roman, Helvetica, Arial, Cambria, or Symbol. If you are supplying EPS, PS, or PDF files, all fonts must be embedded. Some fonts may only be native to your operating system; without the fonts embedded, parts of the graphic may be distorted or missing.

A safe option when finalizing your figures is to strip out the fonts before you save the files, creating "outline" type. This converts fonts to artwork which will appear uniformly on any screen.

I. Using Labels Within Figures

1) **Figure Axis Labels**

   a) Figure axis labels are often a source of confusion. 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. For example, write "Magnetization (A/m)" or "Magnetization (A $\cdot$ 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."

   b) Multipliers can be especially confusing. Write "Magnetization (kA/m)" or "Magnetization (10^3 A/m)." Do not write "Magnetization (A/m) × 1000" because the reader would not know whether the top axis label means 16000 A/m or 0.016 A/m. Figure labels should be legible, approximately 8- to 10-point type.

2) **Subfigure Labels in Multipart Figures and Tables**
   Multipart figures should be combined and labeled before final submission. Labels should appear centered below each subfigure in 8-point Times New Roman font in the format of (a) (b) (c).

J. Referencing a Figure or Table Within Your Article

When referencing your figures and tables within your article, use the abbreviation "Fig." even at the beginning of a sentence. Do not abbreviate "Table." Tables should be numbered with Roman numerals.

K. Submitting Your Graphics

Because IEEEP will do the final formatting of your article, all figures, figure captions, and tables can be placed at the end of your article. However, if you do place your figures within the article, they should be placed at the top of the page, closest to the first mention in the text. Figures should be submitted as individual files, separate from the manuscript in one of the file formats listed above. Place figure captions below the figures; place table headings above the tables. Do not include captions as part of the figures, or put them in "text boxes" linked to the figures. Also, do not place borders around the outside of your figures.

L. Color Processing / Printing in IEEEP Journal and Letter

All IEEEP Journal and Letter allow an author to publish color figures on IEEEP at no charge, and automatically convert them to grayscale for print versions. In most journals, figures and tables may alternatively be printed in color if an author chooses to do so. Please note that this service comes at an extra expense to the author. If you intend to have print color graphics, you will have the opportunity to indicate this in the Author Gateway.

V. CONCLUSION

A conclusion section is not required. Although a conclusion may review the main points of the article, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

APPENDIX

Appendixes, if needed, appear before the acknowledgment.

REFERENCES AND FOOTNOTES

A. References

References need not be cited in text. When they are, they appear on the line, in square brackets, inside the punctuation. Multiple references are each numbered with separate brackets. When citing a section in a book, please give the relevant page numbers. In text, refer simply to the reference number. Do not use "Ref." or "reference" except at the beginning of a sentence: "Reference [3] shows ... ." Please do not use automatic endnotes in *Word*, rather, type the reference list at the end of the paper using the "References" style.

Reference numbers are set flush left and form a column of their own, hanging out beyond the body of the reference. The reference numbers are on the line, enclosed in square brackets. In all references, the given name of the author or editor is abbreviated to the initial only and precedes the last name. Use them all; use *et al.* only if names are not given or if there are more than 6 authors. Use commas around Jr., Sr., and III in names. Abbreviate conference titles. When citing IEEEP Transactions, provide the issue number, page range, volume number, month if available, and year. When referencing a patent, provide the day and the month of issue, or application. References may not include all information; please obtain and include relevant information. Do not combine references. There must be only one reference with each number. If there is a URL included with the reference, it can be included at the end of the reference.

Other than books, capitalize only the first word in an article title, except for proper nouns and element symbols. For articles published in translation journals, please give the English citation first, followed by the original foreign-language citation. See the end of this document for formats and examples of common references. For a complete discussion of references and their formats, see the *IEEE Editorial Style Manual for Authors* at

https://journals.ieeeauthorcenter.ieee.org/create-your-ieee-journal-article/create-the-text-of-your-article/ieee-editorial-style-manual/.

B. Footnotes

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

SUBMITTING YOUR ARTICLE FOR REVIEW

A. Review Stage Using Open Journal System (OJS)

Contributions to the Transactions, Journals, and Letters may be submitted electronically on IEEEP's online manuscript submission and peer-review system, OJS. You can get help choosing the correct publication for your manuscript as well as find their corresponding OJS peer review site using the tools listed at https://IEEEPnhrj.org/index.php Once you have chosen your publication and navigated to the OJS site, check first to see if you have an existing account. If there is none, please create a new account. After logging in, click "Start New Submission."

Along with other information, you will be asked to select the manuscript type from the journal's pre-determined list of options. Depending on the journal, there are various steps to the submission process; please make sure to carefully answer all of the submission questions presented to you. At the end of each step you must click "Save and Continue"; just uploading the paper is not sufficient. After the last step, you should see a confirmation that the submission is complete. You should also receive an e-mail confirmation.

For inquiries regarding the submission of your paper on OJS, please contact info@ieeepnhrj.org or call Mr. Muhammad Irfan (0304-4779923).

B. Final Stage Using OJS

Upon acceptance, you will receive an email with specific instructions regarding the submission of your final files. To avoid any delays in publication, please be sure to follow these instructions. Final submissions should include source files of your accepted manuscript, high quality graphic files (if not embedded in your source file), and a formatted pdf file. The accepted version of your manuscript will also be sent to the IEEEP publication teams for a comparison to the final files to ensure no significant or unauthorized changes were made after acceptance. If you have any questions regarding the final submission process, please contact the administrative contact for the journal. Please complete the copyright at that time to avoid publication delays.

C. Copyright Form

Authors must submit an electronic IEEEP Copyright Form upon submitting their final manuscript files. You are responsible for obtaining any necessary approvals and/or security clearances. For additional information on intellectual property rights, visit

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[1]It is recommended that footnotes be avoided (except for the unnumbered footnote with the receipt date on the first page). Instead, try to integrate the footnote information into the text.

Basic format for the most common types of unpublished references:

J. K. Author, private communication, Abbrev. Month, year.

J. K. Author, "Title of paper," unpublished.

J. K. Author, "Title of paper," to be published.

Examples:

[21] A. Harrison, private communication, May 1995.

[22] B. Smith, "An approach to graphs of linear forms," 2014, *arXiv:2105.02824*.

[23] A. Brahms, "Representation error for real numbers in binary computer arithmetic," IEEEP Computer Group Repository, Paper R-67-85.

Basic formats for standards:

a) *Title of Standard*, Standard number, date.

b) *Title of Standard*, Standard number, Corporate author, location, date.

Examples:

[24] IEEEP Criteria for Class IE Electric Systems, IEEEP Standard 308, 1969.

[25] Letter Symbols for Quantities, ANSI Standard Y10.5-1968.

Basic format for datasets:

Author, Date, Year. "Title of Dataset," distributed by Publisher/Distributor, http://url.com (or if DOI is used, end with a period)

Example:

[26] U.S. Department of Health and Human Services, Aug. 2013, "Treatment Episode Dataset: Discharges (TEDS-D): Concatenated, 2006 to 2009," U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies, doi: 10.3886/ICPSR30122.v2.

Basic format for code:

Author, Date published or disseminated, Year. "Complete title, including ed./vers.#," distributed by Publisher/Distributor, http://url.com (or if DOI is used, end with a period)

Example:

[27] T. D'Martin and S. Soares, 2019, "Code for Assessment of Markov Decision Processes in Long-Term Hydrothermal Scheduling of Single-Reservoir Systems (Version 1.0)," Code Ocean, doi: _1.24433/CO.7212286.v1

First A. Author (Fellow, IEEEP) and all authors may include biographies if the publication allows. Biographies are often not included in conference-related papers. Please check the Information for Authors to confirm. Author photos should be current, professional images of the head and shoulders. The first paragraph may contain a place and/or date of birth (list place, then date). Next, the author's educational background is listed. The degrees should be listed with the type of degree in what field, which institution, city, state, and country, and year the degree was earned. The author's major field of study should be lowercase.

The second paragraph uses the preferred third person pronoun (he, she, they, etc.) and not the author's last name. It lists military and work experience, including summer and fellowship jobs. Job titles are capitalized. The current job must have a location; previous positions may be listed without one. Information concerning previous publications may be included.

The format for listing publishers of a book within the biography is: *Title of Book* (publisher name, year) similar to a reference. Current and previous research interests end the paragraph.

The third paragraph begins with the author's preferred title and last name (e.g., Dr. Smith, Prof. Jones, Mr. Kajor, Ms. Hunter, Mx. Riley). List any memberships in professional societies other than the IEEEP. Finally, list any awards and work for IEEEP committees and publications.

Second B. Author, photograph and biography not available at the time of publication.

Third C. Author Jr. (Member, IEEEP), photograph and biography not available at the time of publication.