Preparation of Papers for Proceedings of the Technical University of Sofia

First A. Author, Second B. Author, and Third C. Author

*Abstract*—These instructions give you guidelines for prepa­ring papers for the Proceedings of the Technical University of Sofia*.* Use this document as a template if you are using MS Word 2007 or later. This template provides the authors with most of the formatting specifications[title, text, heads, etc.] needed for preparing electronic versions of their papers. Paper titles should be written in uppercase and lowercase letters, not all uppercase. Avoid writing formulas, symbols, special characters or footnotes in Paper Title or Abstract. Full names of authors are preferred in the author field, but are not required. Put a space between authors’ initials. The abstract must be a concise yet compre­hensive represen­tation of what is done in your article. In particular, the abstract must be self-contained, without foot­notes, or references. The abstract must be between 150–200 words. Be sure that you adhere to these limits; otherwise, you will need to edit your abstract accordingly. The abstract must be written as one paragraph, and should not contain displayed mathematical equations or tabular material. Ensure that your abstract reads well and is grammatically correct.

*Keywords*—Enter up to five keywords or phrases in alphabetical order, separated by commas. For examples, visit <http://www.ieee.org/documents/taxonomy_v101.pdf>

# INTRODUCTION

This document is a template for MS Word 2007 or later. This template has been tailored for output on the A4 paper size. If you are reading a paper or PDF version of this document, please download the electronic file, Proceedings\_of\_the\_TU-Sofia-template.docx, from the Web site of the Technical University of Sofia at <http://proceedings.tu-sofia.bg/>so you can use it to prepare your manuscript.

The template is used to format your paper and style the text. Margins, column widths, line spacing, and type styles are built-in; examples of the type styles are provided throughout this document and are identified in italic type, within parentheses, following the example. Some components, such as multi-leveled equations, graphics, and tables are not prescribed, although the various table text styles are provided. The formatter will need to create these components, incorporating the applicable criteria that follow.

# Prepare Your Paper Before Styling

Before you begin to format your paper, first write and save the content as a separate text file. Complete all content **and organizational editing before formatting. Please note** sections A-H below for more information on proofreading, spelling and grammar.

Keep your text and graphic files separate until after the text has been formatted and styled. Do not use hard tabs, and[[1]](#footnote-1) limit use of hard returns to only one return at the end of a paragraph. Do not number text heads-the template will do that for you.

# Using the Template

After the text edit has been completed, the paper is ready for the template. Duplicate the template file by using the Save As command, and use the naming convention, such as *paper\_First\_A\_Author\_year.docx* for the name of your paper. In this newly created file, highlight all of the contents and import your prepared text file. You are now ready to style your paper; use the scroll down window on the left of the MS Word Formatting toolbar.

## Paper Format

Please follow this specification when preparing the final version of the manuscript. Papers not complying with it (especially in layout geometry and typesetting) will not be included in the proceedings. Additionally, all papers will be reviewed by a proofreader.

## Page layout

The paper should be composed using the **A4 paper size** (**210 mm x 297 mm**). The left and right margins should be 18.5 mm, while the top and bottom margins should be 20 mm. The paper should be set in **two columns** with **5 mm column separation**. Please, equalize the length of the columns on the last page.

The full paper can be **between 4 and 8 pages** in length. Pages should be without page numbers.

## Typesetting

All paragraphs should be indented 3.6 mm.

**Times New Roman 10 pt** font should be used for normal text in the body of the paper.

## Title and author name(s)

The paper title and the author names appear on the first page and should be set centered across the full page width. The title is set in 24 pt size. The author names appear below the title in 11 pt size, normal face. Paper titles should be written in uppercase and lowercase letters, not all uppercase. Full names of authors are preferred in the author field, but are not required. Put a space between authors' initials. The complete affiliations of the authors should be set in footnote in the first page of the paper.

## Abstract

The paper should start with an abstract giving a short overview on the discussed matter and the presented results. **The abstract must be between 150–200 words.** The abstract should be set in 9 pt font for abstract and 9 pt *italic* font for the word “Abstract.”

## Section headings

Regular paper may be divided in a number of sections. Section titles (including references and acknowledgment) should be typed using Times New Roman 10 pt font in the Small caps option, centered. For numbering use Roman numerals.

The subsection headings appear in 10 pt *italic* font and they are enumerated by capital letters followed by periods (“*A*.”, “*B*.”, etc.)and are flush left above their sections. The first letter of each word is capitalized.

## Equations

Equations are centered within columns. You will need to determine whether or not your equation should be typed using either the Times New Roman or the Symbol font (please no other font).The equations may have a reference number placed on the right. The reference number should be enclosed in parentheses. For example

 (1)

Larger equation must be split in multiple lines.

 (2)

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). Refer to “(1),” and at the beginning of a sentence “Equation (1) is ....”

## Figures and tables

Figures and tables should be placed as close as possible to the text where they are first referenced to. Figures should be numbered in the order of appearance in the paper. Figures should be positioned within a single column or they can span two columns. In the latter case they should be placed at the top of a page. Place figure captions below the figures; place table titles above the tables. The captions are centered within a column. If your figure has two parts, include the labels “(a)” and “(b)” as part of the artwork. Please verify that the figures and tables you mention in the text actually exist. Use the abbreviation “Fig.” even at the beginning of a sentence. Do not abbreviate “Table.” Tables are numbered with Arabic numerals. Table caption should be written using Times New Roman 9 pt small caps font.

TABLE I

Units for Magnetic Properties

|  |  |  |
| --- | --- | --- |
| Symbol | Quantity | Conversion from Gaussian and  CGS EMU to SI a |
| Φ | magnetic flux | 1 Mx→ 10−8Wb = 10−8 V·s |
| *B* | magnetic flux density,  magnetic induction | 1 G → 10−4 T = 10−4Wb/m2 |
| *H* | magnetic field strength | 1 Oe→ 103/(4π) A/m |
| *m* | magnetic moment | 1 erg/G = 1 emu  → 10−3 A·m2 = 10−3 J/T |
| *M* | magnetization | 1 erg/(G·cm3) = 1 emu/cm3  → 103 A/m |
| 4π*M* | magnetization | 1 G → 103/(4π) A/m |
| σ | specific magnetization | 1 erg/(G·g) = 1 emu/g → 1 A·m2/kg |
| *j* | magnetic dipole moment | 1 erg/G = 1 emu  → 4π× 10−10Wb·m |
| *J* | magnetic polarization | 1 erg/(G·cm3) = 1 emu/cm3  → 4π× 10−4 T |
| χ*,*κ | susceptibility | 1 → 4π |
| χρ | mass susceptibility | 1 cm3/g → 4π× 10−3 m3/kg |
| μ | permeability | 1 → 4π× 10−7 H/m  = 4π× 10−7Wb/(A·m) |
| μr | relative permeability | μ→μr |
| *w, W* | energy density | 1 erg/cm3→ 10−1 J/m3 |
| *N, D* | demagnetizing factor | 1 → 1/(4π) |

Vertical lines are optional in tables. Statements that serve as captions for the entire table do not need footnote letters.

aGaussian units are the same as cg emu for magnetostatics; Mx = maxwell, G = gauss, Oe = oersted; Wb = weber, V = volt, s = second, T = tesla, m = meter, A = ampere, J = joule, kg = kilogram, H = henry.



Fig. 1. It is good practice to explain the significance of the figure in the caption.

# Helpful Hints

## References

A list of references should appear at the end of the paper as a separate unnumbered section. References should be listed in the order of appearance in the paper. Use square brackets for the reference list and when referring to references in the text. The sentence punctuation follows the brackets [1]. Multiple references [2], [3] are each numbered with separate brackets [1]–[3].

When citing a section in a book, please give the relevant page numbers [1]. In sentences, refer simply to the reference number, as in [2]. At the beginning of a sentence use “Reference [2] shows ....” References [4], [5] and [6] representing book (when available online), journal (when available online) and report and handbook (when available online), respectively.

Place the actual footnote at the bottom of the column in which it is cited. It is recommended that footnotes be avoided (except for the unnumbered footnote on the first page).

Please note that the references at the end of this document are in the preferred referencing style. Give all authors’ names. Papers that have not been published should be cited as “unpublished” [7]. Papers that have been accepted for publication, but not yet specified for an issue should be cited as “to be published” [8]. Reference [9] shows basic format for dissertations (Ph.D.). Finally, Reference [10] and [11] shows basic format for patents and standards.

Please, provide enough references concerning the problem.

## 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 CMOS, FPGA, SI, ac, and dc do not have to be defined. Do not use abbreviations in the title unless they are unavoidable.

## Units

Use SI units. If you must use mixed units, clearly state the units for each quantity in an equation.

## 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), or Portable Network Graphics (.PNG) sizes them, and adjusts 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.

## Sizing of Graphics

Most charts, graphs, and tables are one column wide (3.3464inches / 85 millimeters) or page wide (6.88 inches /175 millimeters). Figures can be sized between column and page widths if the author chooses, however it is recommended that figures are not sized less than column width unless when necessary.

**To place the pictures properly in the text, after inserting the picture right click on the picture, Choose “Wrap text” and “Inline with Text”. No other option is allowed.**

## Resolution

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

# Paper Submission

Papers for the review process are submitted electronically on-line with the web-server interface. Please follow the link ***Submitting Your Paper*** on the Proceedings home page <http://proceedings.tu-sofia.bg/>, the left side menu.

Upload the PDF and DOC files of the paper. Also, write complete contact information for all authors. Include full mailing addresses, telephone numbers, fax numbers, and e-mail addresses. In addition, designate one author as the “corresponding author.” This is the author to whom proofs of the paper will be sent. Proofs are sent to the corresponding author only.

# Conclusion

The conclusion should contain a summary of the research done, as well as clearly emphasize the scientific novelty of the paper. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

Although a conclusion may review the main points of the paper, **do not replicate the abstract as the conclusion**.

Appendix

Appendixes, if needed, appear before to write the acknowledgment.

Acknowledgment

Acknowledgments (if any) should appear as a separate non-numbered section before the list of references. Use the singular heading even if you have many acknowledgments.

In most cases, sponsor and financial support acknowledgments are placed in the unnumbered footnote on the first page, not here.

References

[1] J. K. Author, “Title of chapter in the book,” in *Title of His Published Book, x*th ed. City of Publisher, (only U.S. State), Country: Abbrev. of Publisher, year, ch.*x*, sec. *x*, pp. *xxx–xxx.*

[2] J. K. Author, “Name of paper,” *Abbrev. Title of Periodical*, vol. *x, no*. *x,* pp*. xxx-xxx,* Abbrev. Month, year, DOI. 10.1109.*XXX*.123456.

[3] J. K. Author, “Title of paper,” in *Abbreviated Name of Conf.*, City of Conf., Abbrev. State (if given), Country, year, pp. *xxxxxx.*

[4] J. K. Author, “Title of chapter in the book,” in *Title of Published Book*, *x*thed. City of Publisher, State, Country: Abbrev. of Publisher, year, ch. *x*, sec. *x*, pp. *xxx–xxx*. [Online]. Available: http://www.web.com

[5] J. K. Author, “Name of paper,” *Abbrev. Title of Periodical*, vol. *x*, no. *x*, pp. *xxx-xxx*, Abbrev. Month, year. Accessed on: Month, Day, year, DOI: 10.1109.*XXX*.123456, [Online].

[6] J. K. Author. “Title of report,” Company. City, State, Country. Rep. no., (optional: vol./issue), Date. [Online] Available: site/path/file

[7] J. K. Author, “Title of paper,” unpublished.

[8] J. K. Author, “Title of paper,” to be published.

[9] J. K. Author, “Title of dissertation,” Ph.D. dissertation, Abbrev. Dept., Abbrev. Univ., City of Univ., Abbrev. State, year.

[10] J. K. Author, “Title of patent,” BG Patent *x xxx xxx*, Abbrev. Month, day, year.

[11] *Title of Standard*, Standard number, Corporate author, location, date.

1. **Received:** dd.mm.yy

   **Published:** dd.mm.yy

   https://doi.org/10.47978/TUS.2024.74.01.001

   **Name Surname** is with the Technical University of Sofia, Sofia, 1000, 8 Kl. Ohridski Blvd, Bulgaria ([firstauthor@ddd.com](mailto:firstauthor@ddd.com))

   **Name Surname** is with the Technical University of Sofia, Sofia, 1000, 8 Kl. Ohridski Blvd, Bulgaria ([secondauthor@ddd.com](mailto:secondauthor@ddd.com))

   **Name Surname** is with the Technical University of Sofia, Sofia, 1000, 8 Kl. Ohridski Blvd, Bulgaria ([secondauthor@ddd.com](mailto:secondauthor@ddd.com)) [↑](#footnote-ref-1)