Preparation of Papers - Paper Title

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

Abstract—These instructions give you guidelines for preparing papers for conferences or journals. Use this document as a template if you are using Microsoft Word. Otherwise, use this document as an instruction set. The electronic file of your paper will be formatted further. Define all symbols used in the abstract. Do not cite references in the abstract. Do not delete the blank line immediately above the abstract; it sets the footnote at the bottom of this column. Page margins are 1.78 cm top and down; 1.65 cm left and right. Each column width is 8.89 cm and the separation between the columns is 0.51 cm.

Keywords—About four key words or phrases in alphabetical order, separated by commas.

I. INTRODUCTION

This document is a template for Word (doc, docx) versions. If you are reading a paper version of this document, so you can use it to prepare your manuscript.

When you open template.docx, select “Page Layout” from the “View” menu in the menu bar (View | Page Layout), which allows you to see the footnotes. Then type over sections of template.docx or cut and paste from another document and then use markup styles. The pull-down style menu is at the left of the Formating Toolbar at the top of your Word window (for example, the style at this point in the document is “Text”). Highlight a section that you want to designate with a certain style, 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.

To insert images in Word, position the cursor at the insertion point and either use Insert | Picture | From File or copy the image to the Windows clipboard and then Edit | Paste Special | Picture (with “Float over text” unchecked).

II. PROCEDURE FOR PAPER SUBMISSION

A. Review Stage

Please submit your manuscript electronically for review as e-mail attachments. When you submit your initial full paper version, prepare it in two-column format, including figures and tables.

B. Figures

All tables and figures you insert in your document are to help you gauge the size of your paper, for the convenience of the referees, and to make it easy for you to distribute preprints.

C. Document Modification

If you modify this document for use journals or conferences, you should save it as type “Word - RTF (*.docx)” so that it can be opened by any version of Word.

D. Copyright Form

A copyright form should accompany your final submission. Authors are responsible for obtaining any security clearances.

III. UNITS

Use either SI (MKS) or CGS as primary units. (SI units are strongly encouraged.) English units may be used as secondary units (in parentheses). This applies to papers in data storage. For example, write “15 Gb/cm² (100 Gb/in²).” An exception is when English units are used as identifiers in trade, such as “3½ in disk drive.” Avoid combining SI and CGS units, such as current in amperes and magnetic field in oersteds. This often leads to confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity in an equation.

The SI unit for magnetic field strength H is A/m. However, if you wish to use units of T, either refer to magnetic flux density B or magnetic field strength symbolized as μ₀H. Use the center dot to separate compound units, e.g., “A·m².”

V. HELPFUL HINTS

A. Figures and Tables

Large figures and tables may span both columns. Place figure captions below the figures; place table titles above the tables. 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. Please do not include captions as part of the figures. Do not put captions in “text boxes” linked to the figures. Do not put borders around the outside of your figures. Use the abbreviation “Fig.” even at the beginning of a sentence. Do not abbreviate “Table.” Tables are numbered with Roman numerals.

The paper is only printed in black-white color. 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. As in Fig. 1, for 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 (10^3 A/m).” Do not write “Magnetization (A/m) × 1000” because the reader would not know whether the top axis label in Fig. 1 meant 16000 A/m or 0.016 A/m. Figure labels should be legible, approximately 8 to 12 point type.

![Magnetic Field](image)

**Fig. 3** Mapping nonlinear data to a higher dimensional feature space

### B. References

Number citations consecutively in square brackets [1]. The sentence punctuation follows the brackets [2]. 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 [2]. In sentences, 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] shows ...” Unfortunately the document translator cannot handle automatic endnotes in Word; therefore, type the reference list at the end of the paper using the “References” style.

Number footnotes separately in superscripts (Insert | Footnote). 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 1).

Please note that the references at the end of this document are in the preferred referencing style. Give all authors’ names; do not use “et al.” unless there are six authors or more. Use a space after authors’ initials. Papers that have not been published should be cited as “unpublished” [4]. Papers that have been submitted for publication should be cited as “submitted for publication” [5]. Papers that have been accepted for publication, but not yet specified for an issue, should be cited as “to be published” [6]. Please give affiliations and addresses for private communications [7].

Capitalize only the first word in a paper title, except for proper nouns and element symbols. For papers published in translation journals, please give the English citation first, followed by the original foreign-language citation [8].

### C. 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 IES, 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.

### TABLE I

**UNITS FOR MAGNETIC PROPERTIES**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Quantity</th>
<th>Conversion from Gaussian and CGS EMU to SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Phi$</td>
<td>magnetic flux</td>
<td>1 Mx $\rightarrow 10^3$ Wb $\rightarrow 10^{-3}$ V·s</td>
</tr>
<tr>
<td>$B$</td>
<td>magnetic flux density, magnetic induction</td>
<td>$1 \text{ G} \rightarrow 4\pi \times 10^{-7}\text{T} = 10^{-4}\text{Wb/m}^2$</td>
</tr>
<tr>
<td>$H$</td>
<td>magnetic field strength</td>
<td>$1 \text{Oe} \rightarrow 10^4/(4\pi)\text{A/m}$</td>
</tr>
<tr>
<td>$m$</td>
<td>magnetic moment</td>
<td>$1 \text{erg/G} = 1 \text{emu}$ $\rightarrow 10^3\text{A·m}^{-1} = 10^{-3}\text{T}$</td>
</tr>
<tr>
<td>$M$</td>
<td>magnetization</td>
<td>$1 \text{emu/cm}^3 = 1 \text{emu} \rightarrow 10^{-3}\text{A/m}$</td>
</tr>
<tr>
<td>$4\pi M$</td>
<td>magnetization</td>
<td>$1 \text{G} \rightarrow 10^4/(4\pi)\text{A/m}$</td>
</tr>
<tr>
<td>$\sigma$</td>
<td>specific magnetization</td>
<td>$1 \text{emu/g} \rightarrow 1 \text{A·m}^{-2}/\text{kg}$</td>
</tr>
<tr>
<td>$j$</td>
<td>magnetic dipole moment</td>
<td>$1 \text{emu} = 1 \text{emu}$ $\rightarrow 4\pi \times 10^{-7}\text{Wb} \rightarrow 10^{-3}\text{A/m}$</td>
</tr>
<tr>
<td>$J$</td>
<td>magnetic polarization</td>
<td>$1 \text{emu/cm}^3 = 1 \text{emu} \rightarrow 4\pi \times 10^{-7}\text{T}$</td>
</tr>
<tr>
<td>$\chi, \kappa$</td>
<td>susceptibility</td>
<td>$1 \rightarrow 4\pi \times 10^{-7}\text{Wb} \rightarrow 4\pi \times 10^{-7}\text{Wb} \rightarrow 10^{-3}\text{A/m}$</td>
</tr>
<tr>
<td>$\chi_0$</td>
<td>mass susceptibility</td>
<td>$1 \text{cm}^3/\text{g} = 4\pi \times 10^{-7}\text{m}^3/\text{kg}$</td>
</tr>
<tr>
<td>$\mu$</td>
<td>permeability</td>
<td>$1 \rightarrow 4\pi \times 10^{-7}\text{H/m}$</td>
</tr>
<tr>
<td>$\mu_r$</td>
<td>relative permeability</td>
<td>$\mu \rightarrow \mu_r$ $\rightarrow 4\pi \times 10^{-7}\text{Wb} \rightarrow 10^{-3}\text{A/m}$</td>
</tr>
<tr>
<td>$w, W$</td>
<td>energy density</td>
<td>$1 \text{erg/cm}^3 = 10^{-3}\text{J}$</td>
</tr>
<tr>
<td>$N, D$</td>
<td>demagnetizing factor</td>
<td>$1 \rightarrow 1/(4\pi)$</td>
</tr>
</tbody>
</table>

No vertical lines in table. Statements that serve as captions for the entire table do not need footnote letters.

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

### D. Equations

Number equations consecutively with equation numbers in parentheses flush with the right margin, 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. 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

$$\int_0^\infty F(r, \phi) \, dr \, d\phi = [\sigma r_j/(2\mu_s)]$$

$$\int_0^\infty \exp(-\lambda |z_j - z_i|) \, \lambda^{-1} \, J_0(\lambda r_j) \, J_0(\lambda r_i) \, d\lambda.$$  

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),” not “Eq. (1)” or “equation (1),” except at the beginning of a sentence: “Equation (1) is ...”

### E. Other Recommendations

#### Use one space after periods and colons. Hyphenate complex modifiers: “zero-field-cooled magnetization.” Avoid dangling participles, such as, “Using (1), the potential was calculated.” [It is not clear who or what used (1).] Write instead, “The potential was calculated using (1),” or “Using (1), we calculated the potential.”

Use a zero before decimal points: “0.25,” not “.25.” Use “cm,” not “cc.” Indicate sample dimensions as “0.1 cm ×
0.2 cm,” not “0.1 × 0.2 cm².” The abbreviation for “seconds” is “s,” not “sec.” Do not mix complete spellings and abbreviations of units: use “Wb/m²” or “webers per square meter,” not “webers/m².” When expressing a range of values, write “7 to 9” or “7–9,” not “7–9.”

A parenthetical statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within the parentheses.) In American English, periods and commas are within quotation marks, like “this period.” Other punctuation is “outside!” Avoid contractions; for example, write “do not” instead of “don’t.” The serial comma is preferred: “A, B, and C” instead of “A, B and C.”

If you wish, you may write in the first person singular or plural and use the active voice (“I observed that ...” or “We observed that ...” instead of “It was observed that ...”). Remember to check spelling. If your native language is not English, please get a native English-speaking colleague to proofread your paper.

VI. SOME COMMON MISTAKES

The word “data” is plural, not singular. The subscript for the permeability of vacuum µ0 is zero, not a lowercase letter “o.” The term for residual magnetization is “remanence”; the adjective is “remnant”; do not write “remnance” or “remannt.” Use the word “micrometer” instead of “micron.” 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). Use the word “issue” as a euphemism for “problem.” When to mean “approximately” or “effectively.” Do not use the word “essentially” instead of “while” (unless you are referring to simultaneous events). Do not use the word “essentially” to mean “approximately” or “effectively.” Do not use the word “issue” as a euphemism for “problem.” When compositions are not specified, separate chemical symbols by en-dashes; for example, “NiMn” indicates the intermetallic compound Ni₀.₅Mn₀.₅ whereas “Ni–Mn” indicates an alloy of some composition NiₓMn₁₋ₓ.

Be aware of the different meanings of the homophones “affect” (usually a verb) and “effect” (usually a noun), “complement” and “compliment,” “discreet” and “discrete,” “principal” (e.g., “principal investigator”) and “principle” (e.g., “principle of measurement”). Do not confuse “imply” and “infer.”

Prefixes such as “non,” “sub,” “micro,” “multi,” and “ultra” are not independent words; they should be joined to the words they modify, usually without a hyphen. There is no period after the “et” in the Latin abbreviation “et al.” (it is also italicized). The abbreviation “i.e.,” means “that is,” and the abbreviation “e.g.,” means “for example” (these abbreviations are not italicized).

An excellent style manual and source of information for science writers is [9]. A general style guide, Information for Authors, is available at the web site.

VII. EDITORIAL POLICY

Submission of a manuscript is not required for participation in a conference. Do not submit a reworked version of a paper you have submitted or published elsewhere. Do not publish “preliminary” data or results. The submitting author is responsible for obtaining agreement of all coauthors and any consent required from sponsors before submitting a paper. We strongly discourages courtesy authorship. It is the obligation of the authors to cite relevant prior work.

We publish papers related to conferences that have been recommended for publication on the basis of peer review. As a matter of convenience and service to the technical community, these topical papers are collected and published in one issue.

At least two reviews are required for every paper submitted. For conference-related papers, the decision to accept or reject a paper is made by the conference editors and publications committee; the recommendations of the referees are advisory only. Undecipherable English is a valid reason for rejection. Authors of rejected papers may revise and resubmit them to as regular papers, whereupon they will be reviewed by two new referees.

VIII. PUBLICATION PRINCIPLES

The contents are peer-reviewed and archival. We publish scholarly articles of archival value as well as tutorial expositions and critical reviews of classical subjects and topics of current interest.

Authors should consider the following points:

1) Technical papers submitted for publication must advance the state of knowledge and must cite relevant prior work.

2) The length of a submitted paper should be commensurate with the importance, or appropriate to the complexity, of the work. For example, an obvious extension of previously published work might not be appropriate for publication or might be adequately treated in just a few pages.

3) Authors must convince both peer reviewers and the editors of the scientific and technical merit of a paper; the standards of proof are higher when extraordinary or unexpected results are reported.

4) Because replication is required for scientific progress, papers submitted for publication must provide sufficient information to allow readers to perform similar experiments or calculations and use the reported results. Although not everything need be disclosed, a paper must contain new, useable, and fully described information. For example, a specimen’s chemical composition need not be reported if the main purpose of a paper is to introduce a new measurement technique. Authors should expect to be challenged by reviewers if the results are not supported by adequate data and critical details.

5) Papers that describe ongoing work or announce the latest technical achievement, which are suitable for presentation at a professional conference, may not be appropriate for publication.

IX. CONCLUSION

A conclusion section is not required. Although a conclusion may review the main points of the paper, 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.

ACKNOWLEDGMENT

The preferred spelling of the word “acknowledgment” in American English is without an “e” after the “g.” Use the singular heading even if you have many acknowledgments. Avoid expressions such as “One of us (S.B.A.) would like to thank ... .” Instead, write “F. A. Author thanks ... .” Sponsor and financial support acknowledgments are placed in the unnumbered footnote on the first page.

REFERENCES

SUMMARY and CHECK LIST

1) Please download template paper to your computer. Then “save as” with a different name (Ex: mytemplate.docx). Now, copy-paste your paper “paragraph by paragraph” to mytemplate.docx

NOTE: If the “font size or type” of your paper is different, you may have problems while pasting it to mytemplate.docx. To solve this font problem:

1st Step: Copy-paste the paragraph from your paper to notepad.
2nd Step: Copy-paste the paragraph from notepad to mytemplate.docx

2) Do not delete the blank line immediately above the abstract; it sets the footnote at the bottom of this column.

IMPORTANT:
Before submitting your paper, please check the following instructions on your final paper.

3) Paper Size: Letter
4) Page margins are 1.78 cm top and down; 1.65 cm left and right.
5) Each column width is 8.89 cm and the separation between the columns is 0.51 cm.
6) Paper Title: Times New Roman, 24 pt., Centered, Title Case (Capitalize Each Word), NOT Bold
7) Authors’ Names: Times New Roman, 11 pt., Centered, Title Case (Capitalize Each Word)

IMPORTANT: Do NOT write your institution address below your name. See “Affiliation”

8) Abstract—: Times New Roman BOLD, 10 pt.
   i. Text should be written Times New Roman 9 pts.
   ii. The abstract should be self-contained. Do not cite references in the abstract.
   iii. The abstract should not exceed 500 words.
   iv. Paragraph - Line Spacing- Single
9) Keywords—: Times New Roman BOLD, 10 pt.
   i. Text should be written Times New Roman 9 pts
   ii. Add about four keywords or phrases in alphabetical order, separated by commas.
   iii. Paragraph - Line Spacing- Single
10) Except abstract, keywords, figure & table captions, for the whole text:
   i. Paragraph - Line Spacing- Multiple 1.05.
   ii. Alignment: Justified
   iii. Special: First Line: 0.36 cm

11) Heading 1: Times New Roman, 10 pt, Centered
   1st Step: Capitalize each word. Example: Steps in Modeling and Simulation
   2nd Step: Choose and Right click - Font- Effects - Small caps

X. STEPS IN MODELING AND SIMULATION

12) Heading 2: Times New Roman Italic, 10 pt, Capitalize each word. Example:
A. Definition of Parallel Manipulator

Choose Paragraph: Values should be as in Fig. 1:
COMMON MISTAKES: 1. Definition of Parallel Manipulator, 2. Definition of Parallel Manipulator etc...

13) **Heading 3:** Times New Roman, 10 pt, Capitalize each word. Values should be as in Fig. 1. **Example:**

1. Mobility Equation

14) **Introduction Part:** First letter should be Times New Roman 28 pts. Whole word should be written in “Upper Case”.

15) **Affiliation:** Times New Roman, 8 pt. Affiliation part should be written at the bottom of the first page on the left as:

Sponsor and financial support acknowledgments can be written here. Name Surname is with the National Institute of Standards and Technology, Boulder, CO 80305 USA (corresponding author to provide phone: 505-555-5555; fax: 505-555-5555; e-mail: author@boulder.nist.gov).

16) **Figures:** Large figures may span both columns. If your figure has two parts, include the labels “(a)” and “(b)” as part of the artwork. (Ex: Fig. 3 (a) Mapping nonlinear data...)

i. Figures should be centered.

ii. All figures should be captioned. Captions should be written “Times New Roman, 9 pt., centered”

iii. Please do not include captions as part of the figures.

iv. Do not put captions in “text boxes” linked to the figures.

v. Do not put borders around the outside of your figures.

vi. Use the abbreviation “Fig.” even at the beginning of a sentence.

WRONG: Figure 2.1 represents... CORRECT: Fig. 2 represents...

17) **Tables:** Large tables may span both columns.

i. Tables should be centered.

ii. All tables should be captioned. Captions should be written “Times New Roman, 8 pt., centered”

iii. Please do not include captions as part of the tables.

iv. Word “TABLE”: Upper case, Number: Tables are numbered with Roman numerals

v. Caption: Capitalize each word: Units for Magnetic Properties **THEN Font-Effects-Small Caps**

**Result:**

<table>
<thead>
<tr>
<th>TABLE I</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNITS FOR MAGNETIC PROPERTIES</td>
</tr>
</tbody>
</table>

COMMON MISTAKES: Table 1, Table 2.1 etc..
18) **Equations:**

i. Number equations consecutively with equation numbers in parentheses flush with the right margin, as in (1).

ii. Refer to “(1),” not “Eq. (1)” or “equation (1),” except at the beginning of a sentence: “Equation (1) is ... .”

\[ R_u = K_n LW\sigma_e \]  
(Align equation to the right)

19) **References:**

i. Number citations consecutively in square brackets [1].

ii. The sentence punctuation follows the brackets [2].

iii. Multiple references [2], [3] are each numbered with separate brackets [1]–[3].

iv. When citing a section in a book, please give the relevant page numbers [2].

v. In sentences, refer simply to the reference number, as [3].


**COMMON MISTAKES:** .... load carrying capacity of the weld (Mellor, 99).

20) **Acknowledgment:**

**COMMON MISTAKES:** Acknowledgement  
Correct form: ACKNOWLEDGMENT (No “e” after “g”)

Avoid expressions such as “One of us (S.B.A.) would like to thank ... .”

21) Do not change the font sizes or line spacing to squeeze more text. There is no page limitation.

22) Use italics for emphasis; do not underline.

23) Text should be written in the third person to avoid sounding like an autobiographical account penned by a narcissistic author.

Prefer: “It is possible to ..” than to say “One could ... .”

24) Avoid using above (“the above method,” “mentioned above,” etc.) or below (in the figure below). Be specific.

25) The following link includes some of the troublesome words, terms, and expressions most frequently found in Experiment Station journal paper and bulletin manuscripts:

http://www.ag.iastate.edu/aginfo/checklist.php