

Preparation of Papers for the International Workshop on NFC

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Abstract—These instructions give you guidelines for preparing papers for the International Workshop on NFC. Use this document as a template if you are using \LaTeX . Do not cite references in the abstract.

I. INTRODUCTION

This demo file is intended to serve as a “starter file” for IEEE conference papers produced under \LaTeX using IEEEtran.cls [1] version 1.7 and later. If you are reading a paper or PDF version of this document, please download the electronic file, NFC_Conf_LaTeX.ZIP, from the conference Web site so you can use it to prepare your manuscript. If you would prefer to use Microsoft Word, download the Word template file from the same Web page. When you open nfc_conf.tex in TeXnicCenter, select “ $\LaTeX \Rightarrow$ PDF” as your output profile.

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 ($\emph{\{ \}}$) for emphasis; do not underline.

Please observe the conference page limits.

II. PROCEDURE FOR PAPER SUBMISSION

A. Review Stage

For your initial submission of the paper, please replace your author information above with dummy names (or alternatively with the text “– Submission to International Workshop on NFC –”) to support the double-blind review process.

B. Final Stage

Please do not forget to insert your author information for the camera-ready paper submission.

C. Author Biographies and Photographs

Please do not include author biographies and/or author photos in your camera-ready paper.

III. UNITS

Use either SI (MKS) or CGS as primary units. (SI units are strongly encouraged.) 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 $\mu_0 H$. Use the center dot to separate compound units, e.g., “A·m².”

IV. HELPFUL HINTS

A. Figures and Tables

Position figures and tables at the top of each column (i.e. specify “t” as the figure’s/table’s position argument) and avoid figures on the first page. 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 use the subfigure package. Note that often IEEE papers with subfigures do not employ subfigure captions (using the optional argument to \backslash subfigure), but instead will reference/describe all of them (a), (b), etc., within the main caption.

Please verify that the figures and tables you mention in the text actually exist. Please do not include captions as part of the figures’ artwork. 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.

Note that, \LaTeX 2_ε, unlike IEEE journals/conferences, places footnotes above bottom floats. This can be corrected via the \backslash fnbelowfloat command of the stfloats package.

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 ($A \cdot m^{-1}$),” not just “A/m.” Do not label axes with a ratio of quantities and units. For example, write “Temperature (K),” not “Temperature/K.” Multipliers can be especially confusing. Write “Magnetization (kA/m)” or “Magnetization (103A/m).” Do not write “Magnetization ($A/m \times 1000$)” 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.

B. References

Use the \backslash cite command to insert citations [2]. The sentence punctuation follows the brackets [3]. Multiple references

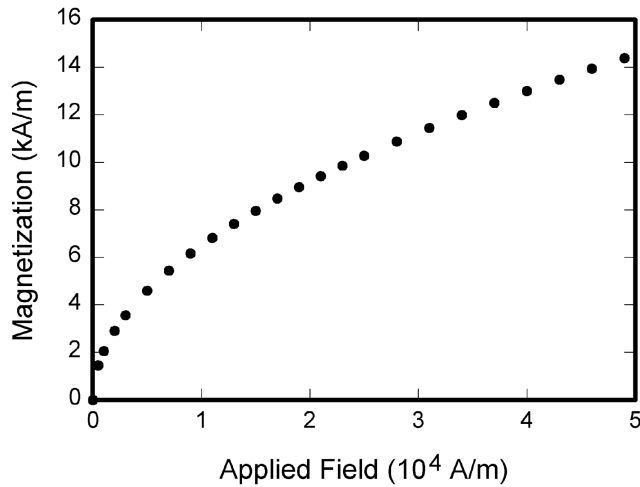


Fig. 1. Magnetization as a function of applied field. It is good practice to explain the significance of the figure in the caption.

TABLE I
UNITS FOR MAGNETIC PROPERTIES

Symbol	Quantity	Conversion from Gaussian and CGS EMU to SI ^a
Φ	magnetic flux	1 Mx \rightarrow 10^{-8} Wb = 10^{-8} V \cdot s
B	magnetic flux density, magnetic induction	1 G \rightarrow 10^{-4} T = 10^{-4} Wb/m ²
H	magnetic field strength	1 Oe \rightarrow $10^3/(4\pi)$ A/m
$4\pi M$	magnetization	1 G \rightarrow $10^3/(4\pi)$ A/m
...
N, D	demagnetizing factor	1 \rightarrow $1/(4\pi)$

Vertical lines should not be used in tables. The top and bottom lines of the table and the line following the column headings have a weight of 1 pt, the other lines have a weight of 0.5 pt. Statements that serve as captions for the entire table do not need footnote letters.

^a Gaussian units are the same as cgs 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.

[4], [5] are each numbered with separate brackets. 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 ...”

Please note that IEEEtran.bst is the preferred referencing style. Usage of BibTeX (in combination with the file literature.bib, which should contain your references) is strongly encouraged. Before your final submission of the camera-ready paper, please use the `\IEEEtriggeratref{}` command to distribute your references section evenly across the two columns on the last page.

1) *Footnotes*: Use the `\footnote{}` command to generate footnotes¹. Use letters for table footnotes (see Table I).

¹It is recommended that footnotes be avoided. Instead, try to integrate the footnote information into the text.

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 IEEE, 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, “IEEE” in the title of this article).

D. Equations

Use the `equation` and `eqnarray` environments to insert numbered equations. Use parentheses to avoid ambiguities in denominators. Punctuate equations when they are part of a sentence, as in

$$\int_0^{r_2} F(r, \varphi) dr d\varphi = [\sigma r_2 / (2\mu_0)] \quad (1)$$

$$\cdot \int_0^\infty \exp(-\lambda |z_j - z_i|) \lambda^{-1} J_1(\lambda r_i) d\lambda.$$

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 by using (1),” or “Using (1), we calculated the potential.”

Use a zero before decimal points: “0.25,” not “.25.” Use “cm³,” not “cc.” Indicate sample dimensions as “0.1 cm \times 0.2 cm,” not “0.1 \times 0.2 cm².” The abbreviation for “second” 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 carefully proofread your paper.

V. SOME COMMON MISTAKES

The word “data” is plural, not singular. The subscript for the permeability of vacuum μ_0 is zero, not a lowercase letter “o.” The term for residual magnetization is “remanence”; the adjective is “remanent”; do not write “remnance” or “remnant.” 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 “whereas” 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 $\text{Ni}_{0.5}\text{Mn}_{0.5}$ whereas “Ni–Mn” indicates an alloy of some composition $\text{Ni}_x\text{Mn}_{1-x}$.

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).

A general IEEE style guide and an Information for Authors are both available at <http://www.ieee.org/web/publications/authors/transjnl/index.html>

VI. EDITORIAL POLICY

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. Courtesy authorship is strongly discouraged. It is the obligation of the authors to cite relevant prior work.

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.

VII. 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.

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” This is also the right place for the acknowledgment of grants.

REFERENCES

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- [4] B. D. Cullity, *Introduction to Magnetic Materials*. Reading, MA: Addison-Wesley, 1972.
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