

Application of a parallel stabilized column generation method as a dual solution approach to Optimal Power Flow problems

Brian Dandurand per Affiliation A
Kibaek Kim per Affiliation A
(Affiliation A) Mathematics and Computer Science Division
Argonne National Laboratory
Lemont, Illinois, United States of America
{bdandurand, kimk}@anl.gov

Abstract—The Latex template and basic guidelines for the preparation of a technical paper for the PSCC 2018 conference are presented. The abstract is limited to 150 words and cannot contain equations, figures, tables, or references. It should concisely state what was done, how it was done, principal results, and their significance.

Index Terms—The author shall provide up to 5 keywords (in alphabetical order) to help identify the major topics of the paper.

I. INTRODUCTION

This document provides authors a Latex template and suggestions to prepare submission for the PSCC 2018 event. The template demonstrates the use of the class `IEEEtran4PSCC.cls`, which is a version of the well known IEEE Latex package where minor modifications were implemented to meet the document specifications defined by the PSCC. The few utilization differences from the conventional `IEEEtran.cls` class are illustrated in this document and the respective source code. For the typesetting options that are not covered in this document, the reader is referred to the *how-to* document that accompanies the original IEEE Latex template [1].

II. CONFERENCE PAPER PREPARATION

Conference papers are limited to a maximum of 7 pages. Please use automatic hyphenation and check your spelling. Additionally, be sure your sentences are complete and that there is continuity within your paragraphs. Check the numbering of your graphics (figures and tables) and make sure that all appropriate references are included.

A. Abbreviations and Acronyms

Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, ac, dc, and rms do

not have to be defined. Do not use abbreviations in the title or section headings unless they are unavoidable.

B. Units

- Metric units are preferred for use in light of their global readership and the inherent convenience of these units in many fields. In particular, the use of the International System of Units (Système Internationale d'Unités or SI Units) is advocated. This system includes a subsystem of units based on the meter, kilogram, second, and ampere (MKSA). U.S. Customary units, or British units, may be used as secondary units (in parentheses). An exception is when U.S. Customary units are used as identifiers in trade, such as 3.5-inch disk drive. The Latex package `siunitx` provides an excellent interface to deal with unit of measurements.
- Avoid combining SI and U.S. Customary 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 that you use in an equation.
- Do not mix complete spellings and abbreviations of units: Wb/m² or *webers per square meter*, not *webers/m²*. Spell out units when they appear in text, e.g. *a few henries* and not *a few H*.
- Use a zero before decimal points: '0.25', not '.25'. Use 'cm³', not 'cc'.

C. Equations

Equations can be inserted as

$$y(x) = rx + i. \quad (1)$$

Be sure that the symbols in your equation have been defined before or immediately following the equation. Refer to your equation as (1) and not as Eq. (1) or equation (1)¹. Both

Applicable sponsors, if any, should be placed using the *thanksto* command

¹Except at the beginning of sentences.

the `align` and `eqref` commands are part of the `amsmath` package, so make sure you have it installed in order to compile this code successfully.

In-line math is usually typed as $s = vt$.

D. Tables

An example is shown in Table I.

TABLE I
THIS IS A TABLE.

One	Two
Three	Four

E. Figures

See the source code. Refer to figures as, for example, Fig. 1, even at the beginning of a sentence. Use words rather than symbols or abbreviations when writing Figure axis labels to avoid confusing the reader. As an example, write the quantity *Magnetization*, or *Magnetization*, M , not just M . If including units in the label, present them within parentheses. Do not label axes only with units. In the example, write *Magnetization* (A/m), not just A/m . Do not label axes with a ratio of quantities and units. For example, write *Temperature* (K), not *Temperature*/ K .

F. References

References are important to the reader; therefore, each citation must be complete and correct. There is no editorial check on references; therefore, an incomplete or wrong reference will be published unless caught by a reviewer and will detract from the authority and value of the paper. References should be readily available publications. List only one reference per reference number. If a reference is available from two sources, each should be listed as a separate reference.

Unless there are six authors or more give all authors names; do not use 'et al.'. Papers that have not been published, even if they have been submitted for publication, should be cited as 'unpublished'. 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. Papers that have been accepted for publication, but not yet published, should be cited as 'in press'.

III. COMMON MISTAKES TO AVOID

- The word 'data' is plural, not singular.
- The subscript for the permeability of vacuum μ_0 , and other common scientific constants, is zero with subscript formatting, not a lowercase letter o .
- In American English, commas, semi-/colons, periods, question and exclamation marks are located within quotation marks only when a complete thought or name is cited, such as a title or full quotation. When quotation marks are used, instead of a bold or italic typeface, to

highlight a word or phrase, punctuation should appear outside of the quotation marks. A parenthetical phrase or statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within the parentheses.)

- 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).
- Do not use the word 'essentially' to mean 'approximately' or 'effectively'.
- In your paper title, if the words 'that uses' can accurately replace the word 'using', capitalize the 'u'; if not, keep using lower-cased.
- Be aware of the different meanings of the homophones 'affect' and 'effect', 'complement' and 'compliment', 'discreet' and 'discrete', 'principal' and 'principle'.
- Do not confuse 'imply' and 'infer'.
- The prefix 'non' is not a word; it should be joined to the word it modifies, usually without a hyphen.
- There is no period after the 'et' in the Latin abbreviation 'et al.'.
- The abbreviation 'i.e.' means 'that is', and the abbreviation 'e.g.' means 'for example'²³.

REFERENCES

- [1] M. Shell, *How to Use the IEEEtran Latex Class*, Latex Archive Contents, http://www.ieee.org/conferences_events/conferences/publishing/templates.htm
- [2] H. Kopka and P. W. Daly, *A Guide to L^AT_EX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.

²Additional note test 1

³Additional note test 2