Guidelines for Preparation of a Paper for Asian Power Electronics Journal

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Abstract–This document contains the content and formatting instructions for preparing a paper for the Asian Power Electronics Power (APEJ). The length of an abstract is approximately 100 to 250 words. Difficult principles should not be included here so as to ensure that non-experts in the same or related fields can understand. The font size is usually 1 to 2 times smaller than that of the main body and bolded as well. There is no need to put citations or equations here.

Keywords–Power converter, resonant converter, motor drives, vector control

I. INTRODUCTION

This section gives a general background and review of the paper or work done by other engineers in the field. It should be well supported by citations. Moreover, the citations are served as a guide for those who want to learn more about the field.

Introduction should give a general background and review of the paper or work done by other engineers in the field. It should also contain literature review, objective and scope of the paper. Leave one space between two paragraphs (Do not indent paragraphs).

If too many symbols are used in the paper, in order to avoid confusion, it is better to put a list of the principal symbols used with classifications before the 'INTRODUCTION'.

II. STYLE INFORMATION

In general, a good layout is more understandable and eye-catching. The following gives you some hints:

- The title should be bolded and centered. There is no need to capitalize all the letters - just the first letter of each word. Do not capitalize the prepositions and conjunctions.
- The names(s) of the author(s) should also be centered with the first name first, followed by initials and then family name.
- The affiliation(s) of the authors(s) should be put in a footnote section, and each should be identify by footnote reference number.
- The body text is divided into sections and subsections. The styles of the section and the subsection headings should be different, just like the style used in this sample paper.

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III. TECHNICAL INFORMATION

Papers are usually submitted in both doc and pdf formats, produced by Microsoft Word® and Adobe® Acrobat® respectively. The pdf file is to help us to understand the page and section breaks whereas the doc format is to help us to typeset into the symposium proceedings.

A. Type sizes

The font to be used is 10 points Times New Roman throughout the text, both sides justified. The following shows a typical font size of journal.

Table 1: Font size and style of the text

Location of text	Size	Style
Title	20 pts	**bold**
Name of the Author	11 pts	regular
Affiliation of the Author	8 pts	regular
Abstract or keywords	9 pts	**bold**
List of symbols	10 pts	*italics*
Main text	10 pts	regular
Equations	10 pts	*italics*
Section heading	10 pts	SMALL CAPITAL
Subsection heading	10 pts	*italic*
Figure caption	9 pts	regular
Table caption	9 pts	**bold**
Table text	9 pts	regular
Reference	9 pts	regular
Footnotes	8 pts	regular
Biographies	8 pts	regular

B. Format

On A4-size paper, you will have to set the margins to: left and right margin: 1.8 cm, top and bottom margin: 1.8 cm. The space between the two columns is 0.8 cm. Paper width: 21 cm and paper height: 29.7 cm. Header: 1.27 cm, Footer: 1.27 cm.

C. Equations

Equations are to put it in the center and its indication number at the right. When two or more co-related equations are presented, they should be aligned according to the equal (=) or the inequality sign ($<$, $>$). An example is shown below:

$$\frac{di_L}{dt} = \frac{V_{in} - V_o}{L} \tag{1}$$

$$C\frac{dv_c}{dt} = i_L - I_o - f(R) \tag{2}$$

It is not necessary to use line space above and below the equation. The font size of the equation should be the same as that of the body text (10 points). The superscript or the subscript should be 2 points smaller. Symbols such as Σ for summation should 2 points larger than the main text. However, if an equation is longer than the column width, it should be broken at the equal or the inequality signs. If

this is not possible, the equation could be broken up at any operation signs, such as plus, minus or multiplication. The sign should be put on the second line preceding the reminder of the equation:

$$V_{T_q} = \frac{1}{M} \sum_{k=(q-1)M+1}^{qM} \left(\bar{J}\alpha d\rho(k-1)\tanh\frac{\alpha d}{2} + \bar{J}\alpha d\rho(k-1)\coth\frac{\alpha d}{2} \right) \quad (3)$$
$$+ \frac{1}{M} \sum_{k=(q-1)M+1}^{qM} 2\bar{J}\alpha d\rho(k-\frac{1}{2})\tanh\alpha d$$

Symbols in your equation should be defined before the equation appears or immediately following. Use '(1),' not 'Eq. (1)' or 'equation (1),' except at the beginning of a sentence: 'Equation (1) is ⋯'. It is preferred to use equation editor for preparation of the equations.

D. Figures Style

The annotation of figures must be clear and large enough in size. This is especially important when the figure is generated automatically from another software package where the size of the annotation is small after it is inserted into a double-column paper. Figures must always be sharp originals (not screen-captured) and rich in contrast. Figure axes should be included as text label with unit (see Fig.1). The reference to a figure may use "Fig. 1" rather than "Figure 1" because of concise requirements. The caption should appear at the centre.
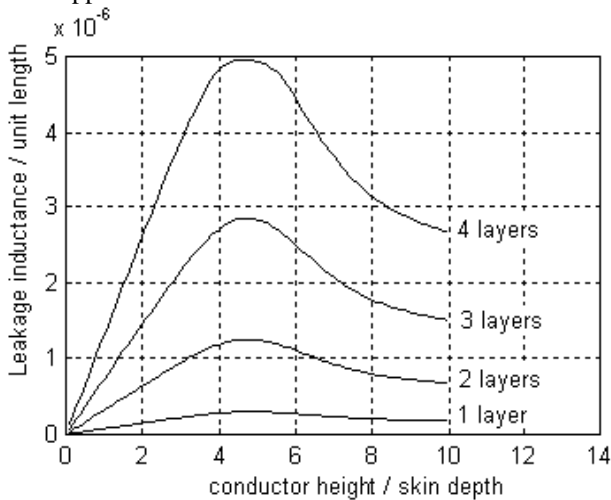

Fig. 1: Examples of the annotation in a figure

E. Table

Set table number and title in bold, centered above table (See Table 1 as an example).

F. References and Citations

All the citations should be in numerical sequence so easy access by reader. Its style is a square bracket to enclose the reference number [2]. However, if the reference appears in the beginning of a sentence or is used as a subject, 'Reference [2]' should be used. Block references are in the form [2-4]. Single and block references can be combined, e.g. [1],[5],[7-9],[15]. The format of references is given at the end of this document.

G. Pages Numbers

The length of the paper should be limited to 6 pages inclusive of everything (Figures, Tables, etc.). Financial charge will be needed for each extra page at HK$100. No page number is needed; our editor will add the page number.

H. Sections

All sections should be numbered, starting from I. for INTRODUCTION to whatever number for CONCLUSION. Do not number ACKNOWLEDGEMENT, REFERENCES and BIOGRAPHY. The heading of a section should be in 10 points Times New Roman (see Table 1), centered. An additional white space is left between the end of the section above and the section head.

A. Subsections

The heading of a subsection should also be in 10 points Times New Roman italic (see Table 1), left justified, but capitalize only the first letter of the first word of a subsection.

IV. CONCLUSION

This section describes the contribution of the paper so that even if readers have not read the body of your paper, they still understand the main idea of the paper. You should not insert any discussion statements in this section because they can be fitted in the previous sections. Even if the author only designed and tested a system, he can also state the achievement in this section. The following statement is an example: The theory has been implemented in an electronic circuit. The circuit has been prototyped and tested. The experimental results agreed very well with the theoretical prediction and verified the theory proposed.

REFERENCES

[1] K.W.E. Cheng and P.D. Evans, "Calculation of winding losses in high frequency toroidal inductors using multi-strand conductors", IEE Proceedings-Electr. Power Appl., Vol. 142, No. 5, 1995, pp. 313-322.

[2] C.D. Xu, K.W.E. Cheng, H. Zhang, X.K. Ma and K. Ding, "Study of intermittent bifurcations and chaos in buck-boost converters with input regulators", International Conf. on Power Electronics Systems and Applications (PESA), 12-14 Nov 2006, pp. 268-272.

[3] D.E. Goldberg, 'Genetic algorithms in search, optimisation and machine learning' (Addison Wesley, 1989).

[4] K.W.E. Cheng and Y.P.B. Yeung, "DC to DC converter", U.S. patent 6853569, Feb. 2005.

BIOGRAPHY

As a guide, the photo size dimention is: 2.4 to 3.6cm width and 3.2 to 4cm height with adequate resolution.
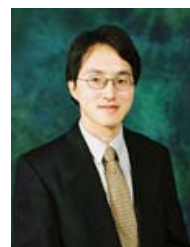
K.W.E.Cheng obtained his BSc and PhD degrees both from the University of Bath in 1987 and 1990 respectively. Before he joined the Hong Kong Polytechnic University in 1997, he was with Lucas Aerospace, United Kingdom as a Principal Engineer.
He received the IEE Sebastian Z De Ferranti Premium Award (1995), outstanding consultancy award (2000), Faculty Merit award for best teaching (2003) from the University and Silver award of the 16th National Exhibition of Inventions. He has published over 200 papers and 7 books. He is now the professor and director of Power Electronics Research Centre.