

# PAPER FORMATTING GUIDELINES FOR FPL 2005 PROCEEDINGS

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## ABSTRACT

The abstract should clearly and concisely describe the main results of the work. The abstract must appear on the first page, at the top of the left-hand column of text, 11 mm below the title area. The abstract should contain about 100 to 150 words. References should not be introduced in the abstract.

## 1. INTRODUCTION

This paper provides the formatting guidelines for final paper submissions to the 15th International Field Programmable Logic and Applications (FPL) conference 2005. Using the  $\LaTeX$  and Microsoft Word templates provided on the conference web site is highly recommended.

## 2. FORMATTING THE PAPER

The paper size used in the FPL-05 proceedings is A4 (210 mm wide by 297 mm tall). All printed material, including text, illustrations, charts, footnotes, and tables, must be kept within a print area of 176 mm wide by 227 mm tall. Do not write or print anything outside the print area.

The top margin must be 35 mm, and the left margin 18 mm. All *text* must be in a two-column format. Figures, tables, equations, and such can span two columns, where necessary. The columns are to be 84 mm wide, with a 8-mm space between them.

### 2.1. Fonts and Alignments

The font to be used in the text is Times New Roman. The font size for the text is 10 points, and line spacing a single line. The text must be fully justified.

The first paragraph of each section and subsection begins at the left edge of the column. All subsequent paragraphs have a 5-mm indentation in the first sentence.

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The sections are numbered, excluding the abstract. The section titles are centered on the columns, and typed in bold 10-point uppercase font. Subsection titles are numbered and left-aligned. The typeface for subsection titles is bold 10 points. Using sub-subsections is strongly discouraged.

The title of the paper is typed using bold 12-point uppercase typeface. The font size for the author name(s) and affiliation(s) is 12 points, the names being in *italic*.

## 3. EQUATIONS

All equations must be numbered, the equation number being parenthesized and right-aligned. The equation itself is centered on the column and vertically separated from the text by one text line. In the case of multi-line formulas, the equation number is vertically centered on the equation. An example equation can be written as

$$H(z) = \frac{z^{-N}(1 - z^{-R})^N}{(1 - z^{-1})^N}, \quad (1)$$

where  $N$  and  $R$  are some variables, which are typed in *italic* both in the text and in the equation itself.

If some formulas are inherently connected, the following equation numbering scheme can be used:

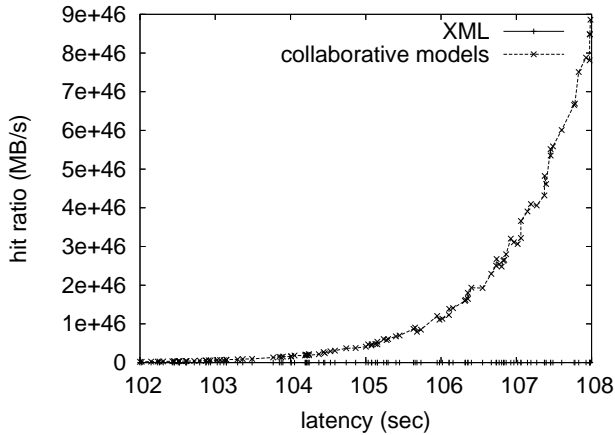
$$y(n) = x(n - 1) + a(n - 1) \quad (2a)$$

$$a(n - 1) = x(n - 2) + b(n - 2) \quad (2b)$$

$$\begin{aligned} b(n) &= x(n - 2) + a(n - 2) + 1 \\ &= y(n - 1) + 1. \end{aligned} \quad (2c)$$

In the  $\LaTeX$  environment, the use of `amsmath`-package is highly recommended. Equations should appear in the text where they are introduced. However, if a formula is exceptionally long, it may span two columns. In this case, the correct placement is on the top of the page, as illustrated in (3).

$$f_{h,\varepsilon}(x, y) = \int L_{x,z}\varphi(x)\rho_x(dz) + \left[ \left( \int_0^{t_\varepsilon} L_{x,y^x(s)}\varphi(x) ds \right) + \left( \int_0^{t_\varepsilon} L_{x,y^x(s)}\varphi(x) ds - \mathbf{E}_{x,y} \int_0^{t_\varepsilon} L_{x,y^\varepsilon(s)}\varphi(x) ds \right) \right] \quad (3)$$



**Fig. 1.** Randomly generated curve.

#### 4. FIGURES AND TABLES

All figures and tables must be numbered. The figure subtitle must be centered below the figure, and the table subtitle centered above the table. The notations for the figure and table subtitles are "Fig. X. YY." and "Table X. YY.", where X is the number of the figure/table, and YY the actual subtitle.

All figures and tables should be placed on the top of the columns. No 'floating' figures or tables are allowed, i.e., no text may reside beside a figure/table within the column(s) the figure/table is placed at. The figures and tables should be introduced in the text on the same or the previous page in which the figure/table resides.

Only high-quality original illustrations should be used as figures in the paper. The preferred file format for figures is encapsulated Postscript (eps). In the  $\LaTeX$  environment, the use of epsfig-package is highly recommended. An example figure is shown in Fig. 1.

Tables can be moderately easily constructed using the  $\LaTeX$  commands. An example of a table is shown in Table 1.

A large figure or table can span two columns, when necessary. The correct placement of full page-width figures and tables is on the top of the page. Sub-figures can also be used, in which case the numbering scheme is similar to (2a)-(2c).

#### 5. FOOTNOTES, HEADERS, AND FOOTERS

Using footnotes is not recommended. If they are used, however, they should be placed at the bottom of the column on

**Table 1.** Example table.

	Proposed design	Reference design
Data 1	1.12 mm <sup>2</sup>	1.91 mm <sup>2</sup>
Data 2	32412	54213
Data 3 (measured)	8.2 mW	11.3 mW
Data 4	some common properties for both designs	

the page on which they are referenced to<sup>1</sup>. The font size for footnotes is 9 points.

Do not insert any headers or footers, such as page numbers, date, or conference name into the paper. All necessary information will be added later by the conference organizers.

#### 6. TECHNICAL GUIDELINES AND RESTRICTIONS

Negative vertical space ( $\backslash\text{vspace}(x)$ ) must not be used outside figures and tables. Type 3 fonts must not be used in the document. This restriction also applies to the figures.

Each author name must be kept on a single line. In the  $\LaTeX$  environment, this is accomplished by placing a tilde ( $\sim$ ) between the first and last name, and possible middle name initials. In  $\LaTeX$ , a tilde should also be placed between 'Fig./Table' and the reference to the figure/table.

The log file which is automatically generated during the  $\LaTeX$  translation should be checked to see that there are no `overfull \hbox` error messages.

#### 7. FORMATTING THE REFERENCES

All references are numbered and formatted using the format adopted by IEEE journals and transactions. The references are listed in the order they are referenced to in the text. The font size for the references is 9 points.

In the  $\LaTeX$  environment, the proper format for the references can be easily attained by using the bibtex extension in conjunction with the IEEE reference and abbreviation style files provided on the conference web site. Examples of different types of references, such as journals [1], [2], [3], [4], [5], conference papers [6], [7], and patents [8], are listed in the References section of this paper.

<sup>1</sup>As shown here

## 8. CONCLUSION

If the last page of the paper is not completely full, arrange, if possible, the columns so that they are evenly balanced, rather than having one long and one short column on the last page.

## 9. REFERENCES

- [1] A. Chandrakasan, S. Sheng, and R. Brodersen, "Low-power CMOS digital design," *IEEE J. Solid-State Circuits*, vol. 27, no. 4, pp. 473–484, Apr. 1992.
- [2] E. Cijvat, S. Tadjpour, and A. Abidi, "Spurious mixing of off-channel signals in a wireless receiver and the choice of IF," *IEEE Trans. Circuits Syst. II*, vol. 49, no. 8, pp. 539–544, Aug. 2002.
- [3] V. Considine, "Digital complex sampling," *IEE Electron. Lett.*, vol. 19, no. 16, pp. 608–609, Aug. 1983.
- [4] M. Bellanger, G. Bonnerot, and M. Coudreuse, "Digital filtering by polyphase network: Application to sample-rate alteration and filter banks," *IEEE Trans. Acoust., Speech, Signal Processing*, vol. 24, no. 2, pp. 109–114, Apr. 1976.
- [5] P. P. Vaidyanathan, "Multirate digital filters, filter banks, polyphase networks, and applications: a tutorial," *Proc. IEEE*, vol. 78, no. 1, pp. 56–93, Jan. 1990.
- [6] M. Henker, T. Hentschel, and G. Fettweis, "Time-variant cic-filters for sample rate conversion with arbitrary rational factors," in *Proc. IEEE 6th IEEE Int. Conf. Electronics, Circuits and Systems*, vol. 1, Sept. 1999, pp. 67–70.
- [7] H.-K. Yang and W. M. Snelgrove, "High speed polyphase CIC decimation filters," in *Proc. IEEE Int. Symp. Circuits Syst.*, vol. 2, May 1996, pp. 229–232.
- [8] A. Mecchia, G. Nicollini, and C. Pinna, "Digital filter," U.S. Patent 6 501 406, Dec. 31, 2002.