A Template for the Creation of a Full Paper Submission to the CIB W78 2021 Conference

**Sylvain Kubicki,** sylvain.kubicki@list.lu

Luxembourg Institute of Science and Technology, Luxembourg, Luxembourg

**Calin Boje,** calin.boje@list.lu

Luxembourg Institute of Science and Technology, Luxembourg, Luxembourg

**Annie Guerriero,** annie.guerriero@list.lu

Luxembourg Institute of Science and Technology, Luxembourg, Luxembourg

Alain Zarli, alain.zarli@r2msolution.com

R2M Solution, Roquefort les Pins, France - ECTP, Brussels, Belgium

Abstract

In this paper, we define the general formatting style and use for full-paper contributions to the CIB W78 2021 conference in Luxembourg. All rules are defined by means of written instructions that are at the same time demonstrated with examples by applying these rules to the text of this template document. They include instructions for the use of text, illustrations, tables, equations and source code. Even though this example abstract is shorter, the paper abstract should not exceed 150 words excluding references to guarantee a concise summary.

Keywords: Formatting rules, CIB W78 conference, full paper

1. Introduction

Writing scientific publications means spreading ideas. In order to guarantee, that these ideas can be freely distributed, we should make sure that no copyright issues are hampering this effort. Implementing such an approach begins with small things like free typography that is yet legible. In the following sections of this formatting instruction paper the various aspect the full-paper submission to the CIB W78 conference are documented. In section 2 the general formatting rules are explained. In section 3 formatting rules for special features such as illustrations, tables and formulas are explained.

1. General Layout

In this section general layout instructions are provided and illustrated.

* 1. Page layout

The page should be size A4 (29.7 cm x 42 cm), the margins should be set to 2.54 cm at all sides. The footer should contain the name of the event (Roboto, 8pt), the top header of each page except for the first one should contain an abbreviated version of the paper title and authors oriented at the citation style introduced in section 4, also set in Robot 8pt and the title set in bold.

* 1. Structuring the document

In order to allow clean, navigable and machine-readable documents, the respective structuring mechanisms of the word-processors should be used. Vertical formatting should be done only through the paragraph vertical margins built into every style.

* + 1. Levels

A multi-level list style is provided in the template and example document that has three levels. The full paper should be limited to these three levels. Numbering of the appropriate sections is set by setting the respective styles “W78 Heading 1”, “W78 Heading 2” and “W78 Heading 3”. Since the most commonly used text-processor has known issues regarding the consistency of its numbering system it is advised to leave these settings untouched. Should things go wrong, or different versions of the software be used (which have interoperability issues and inconsistencies among themselves), then the respective level should be recreated according to the following scheme: 1st level headings are set in Roboto Black 12pt, 2nd and 3rd level headings in Roboto Medium 11pt and 10pt. The distance to the body text on each level should be set to 6pt.

* + 1. Body Text

The “W78 Normal First Paragraph Style” should be used for the first paragraph after a section heading or insertion of figures tables etc. which are not indented.

Consecutive body text paragraphs should use the “W78 Normal” style, which defines a 0,63 cm indent for the first line to allow easy visual navigation of the document. Empty lines should not be used as document structuring means. Forced page breaks to avoid dangling section headings may be used where the improve coherence.

* 1. Fonts and emphasis

In order to encourage the use of freely usable and distributable fonts, all formatting is based on three main font families that are available under permissive licenses and are distributed with the paper template on the conference website.

The main body text is formatted in “Linux Libertine O” 11pt which is an open sourced font type featuring a wide range of Unicode glyphs in many different languages allowing its consistent use for a wide range of applications. It was designed as an alternative to serif body text fonts such as Times New Roman which are licensed but bundled with certain text-processors and thus seem ubiquitous.

The “Linux Libertine O” font comes with advanced features such as ligatures and a dedicated italic variant that adheres to typographic conventions for readability and layout. It is distinctly different from merely setting the individual characters in a slanted fashion. The small ‘a’ character for example *has a different look in italic*. **Bold text** has a different kerning to make it ‘jump out’ from the main body text. Both forms of emphasis should be used only where enhancing the readability of the overall text. Other forms of emphasis are discouraged.

Section heading as well as the title are set in “Roboto black” which is freely available under an Apache license. To format monospaced text in listings or to set technical key words apart from the rest of the text, the freely available font “DejaVu Sans Monospace” should be used but set in 10pt in the body text to cope with its relative height.

1. Figures, tables and equations
	1. Figures

Figures in the full text such as the one provided in Figure 1 should be aligned centered into the document. Raster images should have a printable resolution upwards of 300dpi and may be colored, gray-scale or black and white. All illustrations are preferably provided and inserted as vector graphics in formats such as Encapsulated Postscript (EPS) or the proprietary Enhanced Metafile (EMF) format. This choice depends on the text-processor platform. Different export capabilities of common tools such as Inkscape, Visio, Illustrator (and even MS Powerpoint) etc. can be used to achieve this goal. All figures should have a caption in Roboto 9pt with a caption label starting with “Figure **#**” set in “Roboto” bold. All figures should be referenced in the body text. The wrapping should be set to “top and bottom” with a distance to the text of 0.2 cm.



Figure 1. Illustrations supporting the text should be inserted as vector graphics. Where this is not possible, high resolutions suitable for printing should be included for raster images

* 1. Tables

Tables should minimize the use of vertical lines to improve readability. Their content should be set in at least 9pt to allow readability. To circumvent sub-optimal handling of table distances in MS Word, a single empty line above and below the table in “W78 Normal” style should be used (as an exception to the general rule not to use empty lines for vertical formatting).

Table 1. A table demonstrating the use of tables

|  |  |  |
| --- | --- | --- |
| Header Row  | Header Cell 2 | A number column header |
| First | Explanation of the value in the third column | 3,141592 |
| Second | An arbitrary floating point number to the in the next cell to the left | 100,000.00 |
|  |  |  |

The table should have a caption similar to figures with the label “Table #” set in “Roboto” *above*the table (as opposed to below for figures).

* 1. Formulas

Formulas can be inserted either inline such $a^{2}+b^{2}=c^{2}$ using the respective formula editor or the text-processor at hand. Another option is to insert a numbered formula aligned to the right of the text body margin using the “W78 formula” style that should be referenced within the text. An example is provided in equation (1).

$\left(x+a\right)^{n}=\sum\_{k=0}^{n}\left(\genfrac{}{}{0pt}{}{n}{k}\right)x^{k}a^{n-k}$ ( 1 )

As with other insets, text after an equation continues with a “W78 Normal” paragraph style without indent, since the visual differentiation to the text above is already provided by the formula itself.

* 1. Listings

Listings of source code should be set apart from the main text using the “DejaVu Monospace” font

Listing 1. Showing a pseudo-code snippet of Dijkstra’s algorithm

|  |  |
| --- | --- |
| 123456 | **S** = a sequence**g** = goal**while** prev[**g**] is available: insert **g** at the start of **S**  **g** = prev[**g**]**end while** |

Listings should be inserted into a table without borders. Lines of code should be numbered using the same text style in a separate left column. Syntax-highlighting by colors, bold text etc. is encouraged where it helps to improve the readability.

1. References

References should use a modified Harvard (author date) style to improve readability. Within the body text, single authors are cited as (Alice 2013), two authors as (Alice & Bob 2014) and more than two as (Alice et al 2015). Multiple references by the same combinations of authors can be suffixed by a Latin lower case characters such as (Alice 2013b). The bibliography style is illustrated in the References section of this template. The provision of DOI references or similar resolvable online resources in the form of hypertext links is strongly encouraged as a convenience to readers and reviewers. All cited online resources should state the date of their last visitation. The citation of dynamic content such as Wikipedia is strongly discouraged.

Acknowledgements

Tribute to contributors of the submission, funding organizations etc. should go separate from the text under an unnumbered heading. We would like to thank the countless members of the Open Source community for allowing us to use the fonts and tools that where involved in the creation of this template. The template itself can be reused and modified at will under the CC BY conditions. Intellectual property issues of the content of the papers using this template is a separate issue left to the respective conferences etc.

References

Alice, A. (2013). *A Book on Bob.* 2nd Ed. TUE Publishers. Eindhoven, The Netherlands.

Alice, A. & Bob, B. (2014). A Joint publication on a common topic. Musings on collaborative scientific writings*. An Open Access Journal.* 47 (11). pp. 111-122.

Alice, A., Bob. B. & Clemens C. (2015). A conference paper progressing the topic further. *Proc. of the 32rd CIB W78 Conference.* Eindhoven University of Technology, Eindhoven, The Netherlands, October 27th-29th 2015. pp. 111 (if available, otherwise “online” with permalink, e.g. a DOI)