Ways to include the informal sector in safer and sustainable concrete construction in Africa

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**ABSTRACT**

The entire document should use Times New Roman font. The abstract text (i.e. this paragraph) should be justified in font size 11 with single line spacing; however, the rest of the document uses left-aligned text of font size 12 with multiple line spacing at 1.15 point. All Abstracts are requested in English and must not exceed 250 words. The first page of the document should include only the article title, authorship, contact information, the abstract, and the keywords. The introduction will start on the second page. The abstract should be presented in its final form, as it is intended to appear, since the proceedings will be printed by offset according to the typescripts received. The organising committee will hardly make any modifications or formatting. Please check your typescript carefully to avoid any typographical and spelling errors and do not miss out any required details (e.g. author information). The abstract should clearly point out the intentions and conclusions of the work. Up to ten keywords are allowed, as shown below. Directly under the black line in the footer and flush to the bottom of the page, type the contact information for the corresponding author leaving a blank line between the address and the email & telephone, as shown. This goes only on the first page footer and must fit within the last 8 lines of the page, as shown. No page numbering is permitted throughout the document. The papers will only be published if the author participates in the conference.

***Keywords:*** *Conference, International, Construction, Materials, shotcrete, High Strength, Polymers, Concrete, Corrosion, Impact Loading.*

# INTRODUCTION

## General information

These documents must follow the style and format instructions given in this document, which can be used as a template. The abstracts will be published in a book and the full papers will be published digitally. The paper must not have any page numbers, headers, or footers. The submitted document must be in PDF format and must be completely camera-ready, which means that it will appear as is, in both the printed version and the digital conference proceedings, exactly as prepared by the author. Therefore, it is essential that the paper be accurately and attractively presented. Please pay special attention to the placement of the title of the paper on the first page.

## Length of the documents

The recommended length for a full paper is between 8 to 10 pages, and the extended abstract is between 2 to 3 pages. This includes figures, tables, acknowledgements, references, abbreviations list, etc. Colour figures or drawings can be used in the document. Follow the exact formatting and margins of this template. Placement of the texts, figures, and tables must be within the prescribed margin spaces. Place a full page of text and figures on each page. The absolute maximum allowed size of the final pdf-version of the document is 10 Mb.

## Language

The text must be written in English, including the labels and legends in the figures (though in some particular cases the translation may be provided in the respective caption).

# FORMATTING INSTRUCTIONS

## Paper size and margins

The paper size is A4 (21.0 cm × 29.7 cm) and the typing area has 25 mm margins to all the page borders (top, bottom, left and right). The typing area is, therefore, 160 mm wide.

## Fonts, spacing, and styles

The paper should be written with the Times New Roman typeface. This includes section titles, text captions of figures and tables, citations, and reference list. Equations can be written with the default font of the used text processor (i.e. Cambria Math for MS Word). Major headings should be numbered consecutively; do not underline.

### Paper title

The paper title font is Times New Roman, with a bold character style and a size of 18 pt. This paragraph is left aligned and with single line spacing and with all letters capitalized. The spacing before the title (to the top of the typing area) is 36 pt.

### Authors

The font for the authors’ names (first name and last name) is Times New Roman, with a cursive character style and a size of 12 pt. This paragraph is left aligned and with single line spacing. The spacing between the title and the authors’ names is 24 pt.

### Affiliation and contact information

The authors’ names, affiliation (Titles, Affiliation, E-mail address) must be placed, by this order, following the authors’ names. The font is Times New Roman, with a regular character style and a size of 9 pt. This paragraph is left aligned and with single line spacing. The spacing between the authors’ names and affiliations is 18pt.

### Abstract

The font is Times New Roman, with a regular character style and a size of 12 pt. Abstract paragraphs are justified left with single line spacing. The spacing between the authors’ names affiliation and the abstract is 48 pt. The abstract must not exceed 250 words.

### Keywords

The keywords font is Times New Roman, with a cursive character style and a size of 12 pt. Keywords paragraph is justified left with single line spacing. The spacing between the abstract and the keywords is 24 pt. A maximum number of seven keywords are allowed.

### Section titles

The font of the titles of first level sections is Times New Roman, with a bold character style and a 12 pt size. The title paragraph is left aligned, with all the letters capitalized and with single line spacing. These titles are preceded by Arabic numbers (1., 2., 3., …) followed by 0.75 cm tabulation. Leave one blank lines (24 pt) before the first level titles and 6 pt after.

The font of the titles of second level sections is Times New Roman, with a bold character style and a 12 pt size. The title paragraph is left aligned, with only the first letter capitalized and with single line spacing. These titles are preceded by Arabic numbers (1.1., 1.2., 1.3., …) followed by 1 cm tabulation. Use single line spacing. Leave one blank line (12 pt) before the second level titles, except when they are placed after a first level title, in which case the spacing is only 6 pt.

The font of the titles of third level sections is Times New Roman, with an italic character style and a size of 12 pt. The title paragraph is left aligned, with only the first letter capitalized and with single line spacing. Titles are preceded by Arabic numbers (1.1.1., 1.1.2., 1.1.3., ...) followed by 1.25 cm tabulation. Leave one blank line (12 pt) before the third level titles and 3 pt after.

### Plain text

The plain text font is Times New Roman, with a regular character style and a size of 12 pt. Paragraphs are justified left, with no indentation and with multiple line spacing at 1.15 point. The vertical spacing between paragraphs is 6 pt.

## Equations and mathematical expressions

Should be written using the formula editor of the used text processor, left aligned in lines and numbered with consecutive Arabic numerals in round brackets aligned with the right margin. The symbols of variables in formulas and in the text should be written in italics, while vectors and matrices should be written in bold letters. Formulas should be separated with 1 empty line from the other text. Use SI units. Use correct abbreviations for unit ("%" and not "percent"). As a reference, next equation format (inside a table) can be used for MS Word:

|  |  |
| --- | --- |
| $$A=\frac{πd^{2}}{4}+A\_{ref}$$ |  |

Where $d$ is the diameter of section and $A\_{ref}$ is the reference area. A second example would be:

|  |  |
| --- | --- |
| $$M ϕ\_{i}⋅ω\_{i}=Kϕ\_{i}$$ |  |

Where $M$ is the mas matrix, $K$ is the stiffness matrix and $ω\_{i}$ and $ϕ\_{i}$ are the natural frequency and mode shapes, respectively, corresponding to the “$i$” mode of the structure. When citing formula numbers in the text, they should be put in round brackets, e.g. Eq. (1).

## Figures, diagrams and photographs

Figures, diagrams, photographs should be pasted into the text. Descriptions being an integral part of illustrations should be set using a font not larger than that of the main text of the paper. Descriptions in figures, and figure captions should be in English. Numbers (consecutive Arabic numerals) proceeded by the word “**Figure**” (Bold), and captions should be placed under figures, diagrams and photographs and centered. It is recommended that figures and diagrams are drawn using computer technology. If an MS Word processor is used, it is recommended inserting the figure, text or illustrations using the drawing canvas environment.

Applied Load

**Figure 1.** Third point loading scenario for a simply supported beam.

The font in figure captions is Times New Roman with a size of 10 pt; the caption text is centered. The expression “**Figure X.**” is printed with a bold character style, but the rest of the caption is printed with a regular character style. There must be one blank line (12 pt) above the top of the figure and one blank line (12 pt) below the figure caption. Another example is shown in Figure 2 below, where a diagram is inserted as a picture from file (rather than copy-pasted) and placed as in line with the text.



**Figure 2.** Toughness of steel and polypropylene FRC under impact loading.

The drawings, photographs, and diagrams must be placed within the text (preferably at the top or bottom of a page), as close as possible to where they are first referred to, and numbered consecutively throughout the paper. The following resolutions should be used for all document graphics: 600dpi for monochrome, 300 dpi for gray scale, and 300 dpi for color. The quality of your illustrations has a great effect on how your paper looks. Illustrations should be simple and clear. Please remember that they will appear exactly as you have presented on your manuscript.

## Tables

Tables are centered in the typing area, with a numbered caption above. There must be one blank line (12 pt) above the caption and one blank line (12 pt) below the table. The cell margins should be adequate for a reasonable differentiation between columns data. Do not spread tables out across the page (they can however, fill the page limit if necessary). Type the table number and title immediately above the table.

The font for the text inside the table is Times New Roman size 10 pt. Type alignment within the table is your choice. Keep tables simple. Next example can be used as table format.

**Table 1.** Mortar composition

|  |  |
| --- | --- |
| Samples | Variables |
| w/c ratio | Polymer [%] |
| CS | 0.5 | 10 |
| CS + FL | 0.4 | 20 |

Avoid footnotes if possible. Any illustration (table, figure, photograph) related footnotes, should be placed immediately below the table. If you must use them, please be sure that they are typed within the specified margins.

# CONCLUSIONS

These formatting instructions must be followed by the authors. Only the pdf version of the paper must be uploaded so it is required a pdf-conversion of the document. It is highly recommended to check the final pdf-converted version of the paper before submission, for any possible formatting corruptions caused by the conversion process.

#### ACKNOWLEDGMENTS

The “Acknowledgments” section must be placed right before the “References” section. The title of this section, “Acknowledgments”, is formatted as a first level section title, but unnumbered.

#### REFERENCES

The references should be ordered according to the order in which they are cited in the text, and preceded by consecutive numbers. When citing in the text, the numbers of references should be put in square brackets, e.g. [1]. Several applications of one material can be cited [1,3,5]. Authors are cautioned to give complete information about the references and to check spelling and dates carefully.

The format of the references should be following the APA citation style: [www.**apastyle**.org](http://www.apastyle.org) (included in most of the reference managers). The examples given here below refer to descriptions for publications in a journal [1], proceedings [2] or a book [3].

1. Kowalski, A., & Dziewulak, B. (2006). A method for reinforcement of steel beams. *Journal of Structures*,36(2), 115-127.
2. Borzemski, S. (1990) An algorithm for a certain reliability problem. In: *Proc. 7th Int. Conf. on Systems Engineering* (pp. 242-250). Las Vegas, University of Nevada.
3. Nowacki, W. (1970) *Theory of elasticity.* Warszawa, PWN.