**TITLE (ALL CAPITAL, 12 PT, BOLD, TIMES NEW ROMAN, CENTERED) UP TO TWO LINES**

(Blank line) (Delete the blue words when complete. But leave the specified blank line.)

First-name Last-name1, First-name Last-name2, and First-name Last-name3

(Blank line) (Use 9-pt. Times New Roman for the author’s affiliation.)

1) Ph.D. Candidate, Department of Civil Engineering, Faculty of Engineering, Chulalongkorn University, Bangkok, Thailand. Email: name1@chula.ac.th

2) Ph.D., Assoc. Prof., Department of Architecture, XYZ University, Hong Kong. Email: name2@xyz.hk

3) D. Eng., Prof., Department of Civil and Architectural Engineering, LMN University, Osaka, Japan. Email: name3@lmn-u.ac.jp

(Blank line)

**Abstract:** Abstracts should contain no more than 300 words. (10 pt., Times New Roman). Abstracts should be concise and comprehensible. Abstracts must not contain figures or references.

If another paragraph is necessary, use this indent. Use the Western custom of listing the surname last in the Authors line. Use 10 pt. for the Author line. For each author, list his or her degree, position, affiliation, city, and nation in 9 pt.

(Blank line)

**Keywords:** Provide several keywords, preferably in one line, at most two lines. Separate each keyword with a comma. The first letter of each keyword should be capitalized.

(Blank line)

**1. INTRODUCTION (ALL CAPITAL, 10 PT., BOLD, TIMES NEW ROMAN)**

Please do not use the paper template of ICCBEI 2019. We have modified it for ICCBEI 2023.

Manuscripts must be written in English. To ensure the appearance of your manuscript, avoid two-byte code characters that are used for Asian languages. SI units or acceptable metric systems must be used. Use 10pt., Times New Roman for writing the main text.

Manuscripts ranging from 4 pages (minimum) to 8 pages (maximum) are expected. The recommended number of pages is 6 for a scientific paper and 4 for an industrial/technical paper. Please submit your full paper manuscript in both WORD and PDF files by April 1, 2023.

Please use this template for writing your manuscripts. When copy-and-pasting texts from other files, please choose the “Text-Only” option so that the style of this template, such as line spacing, font, font size, etc. will not be damaged.

All paragraphs have the same indents. Avoid any line space between paragraphs. Please cite references in parentheses such as (Yabuki, 2012). Papers written by two authors should be cited as (Yabuki & Law, 1993). Papers written by more than two authors should be cited taking the first author and then “et al.” as (Yabuki et al., 2011). Multiple references should be cited in alphabetical order (buildingSMART, 2013a; buildingSMART, 2013b; Eastman et al., 2011; Makanae & Dawood, 2009). Please note that multiple references with the same author set and the same year should have a, b, c, …, after the year shown as above and in the REFERENCES.

(Blank line)

**2. METHOD**

**2.1 Second Level Heading (10 pt., Bold, Times New Roman)**

Your paper should be written in A4 size (210 x 297 mm) papers. Use the margin settings specified in Table 1. All tables must be consecutively numbered and inserted as close as possible to the corresponding text. In the text, refer to the table its number, as above, not its relative position. A table caption must appear centered and above each table. Do not insert page numbers.

(Blank line)

Table 1. Margins of the manuscript

|  |  |
| --- | --- |
| Margin | A4 (210 x 279 mm) |
| Top | 25.0 mm |
| Bottom | 25.0 mm |
| Left | 25.0 mm |
| Right | 25.0 mm |

(Blank line)

(1) Third Level Heading (10pt., Times New Roman)

Equations are placed on separate lines, centered, and numbered consecutively in parentheses at the right-hand margin. Equations must be referred to in the main text. For example, “By Equation (1), we obtain the time consumed for the task *Ai*.”

 (1)

(Blank line)

**3. RESULTS**

Figures must be consecutively numbered and inserted as close as possible to the corresponding text. In the text, refer to the figure by its number, e.g., “as shown in Figure 1,” not its relative position. A figure caption must appear centered and below each figure.

When pasting figures, especially, photographs, to your manuscript, please be aware of the size of the manuscript. Try to minimize the size of the graphic files, but not excessively.

Characters in figures must be legible. Try to avoid non-English texts in figures.

When writing abbreviations such as IFC, SHM, CFD, etc. first time in your manuscript, you should spell out each term first and then write its abbreviation in parentheses, e.g., Industry Foundation Classes (IFC), Structural Health Monitoring (SHM), Computational Fluid Dynamics (CFD).

(Blank line)



(Blank line)

Figure 1. General structure of reports, papers, and essays

(Blank line)

Leave a blank line above each first-level heading. In addition, leave a blank line above each figure and below each figure caption, as shown in Figure 1.

(Blank line)

**4. DISCUSSION**

Avoid one-sentence paragraphs and paragraphs containing more than one main idea. While using the American English spelling style, e.g., “color,” “center,” “utilize,” is preferred in the proceedings, the UK style, e.g., “colour,”, “centre,” “utilise,” may be used so long as it is used consistently.

(Blank line)

**5. CONCLUSIONS**

All references in the reference list must be cited in the text and all references cited in the text must be in the reference list. References must be listed in alphabetical order.

(Blank line)

**ACKNOWLEDGMENTS**

The author of this template would like to thank the author of the template for the manuscripts of the proceedings of the 30th International Symposium on Automation and Robotics in Construction and Mining (ISARC 2013).

(Blank line)

**REFERENCES**

(Blank line)

buildingSMART. (2013a). *IFC2x3*. Retrieved from buildingSMART website: <http://www.buildingsmart-tech.org/ifc/IFC2x3/TC1/html/index.htm>

buildingSMART. (2013b). *IFC4 Release Candidate 4*. Retrieved from buildingSMART website: <http://www.buildingsmart-tech.org/ifc/IFC2x4/rc4/html/index.htm>

Eastman, C., Teicholz, P., Sacks, R., and Liston, K. (2011). *BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers, and Contractors* (2nd ed.). John Wiley & Sons.

Makanae, K. and Dawood, N. (2009). Development and evaluation of a tangible terrain representation system for highway route planning, *Computer-Aided Civil and Infrastructure Engineering*, 24 (3), 225-235.

Yabuki, N. (2012). Impact of ICT to civil engineering and roles of civil engineers, *Proceedings of the International Workshop on ICT in Geo-Engineering*, Kyoto, Japan, pp.3-9.

Yabuki, N. and Law, K.H. (1993). An object-logic model for the representation and processing of design standards, *Engineering with Computers*, 9 (9), 133-159.

Yabuki, N., Miyashita, K., and Fukuda, T. (2011). An invisible height evaluation system to preserve good landscapes using augmented reality, *Automation in Construction*, 20 (3), 228-235.