

Prepare manuscript to publish with IAHR monographs using LaTeX

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1.1 | General appearance

Contributions to the *IAHR Monographs* are to be in English (UK). Authors are encouraged to have their contribution checked for grammar. Generally, follow Concise Oxford English Dictionary spelling standard, using the first spelling listed. Abbreviations are allowed but should be spelt out in full when first used. Integers ten and below are to be spelt out. Italicize foreign language phrases (e.g. Latin, French). Authors are required to submit their manuscripts both in PDF and the typeset source (LaTeX or MS-Word) formats, and should check their formatting before submission.

1.2 | The main text and important considerations of the paper

The trim size is **6.5 inches (width) x 9.75 inches (height)**. Text area includes running title; the footer at the bottom is **221mm deep and 146mm wide** with left and right margin of 14mm and top and bottom margin of 14mm. The entire text is in a single column format. Final pagination and update of running titles and insertion of folio numbers will be done by the publisher. Authors are encouraged to use this LaTeX style template. If you're not using this template, please ensure the page dimensions are followed accurately. For titles of books, periodicals and IAHR publications, capitalize all words except articles, conjunctions and prepositions, such as and, of, the, with, to. For titles of IAHR documents, articles, etc. capitalize only the first word, proper nouns and other words normally capitalized

You can use `\documentclass[draft]{iahr-monograph}` to have a draft rule around the text area for your easy formatting of the pages. Once you finalise the pagination, you can commit this line and use `\documentclass{iahr-monograph}` and compile the file i.e. without `[draft]` to get the final output without the draft rule around the page.

The text is to be typed in point and a line spacing at 16 points (exactly option). The encourage you to use the preferred fonts *sourcesanspro* and *sansmathfonts* as the final typeset will be using these fonts.

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If you're unable to use these fonts you may wish to use Times New Roman or Palatino, single spaced. A4 size paper must be used.

1.3 | Headings

1.3.1 | Chapter headings

Chapter and Number will be set in 10/12 points, and the chapter headings will be in 18 points bold (upper lower case) and 22 points line spacing. Each chapter should normally be in a separate file. The chapter title is typeset by using the `\chapter [#1] {#2}` command, where `[#1]` is an optional short title to be used as a running head if the chapter title is too long and `#2` is the full title of the chapter. The short, edited version of the title appears in the table of contents and running head. The chapter title should be typed in with the first word and proper nouns only capitalized.

1.3.2 | Section and subsection headings

Section heading will be set in using 12 points bold and 14 points line spacing. Subsection heading will be set in 10 points bold face and 12 points line spacing. Leave 18pts above space and 6 points space below the heading. Subsubsections heading should be typeset in 9 points and 12 points line spacing. Leave no space after the sub-headings; leave one space before. Typeset sub-subheadings in boldface italic and capitalize the first letter of the first word only. Number the sub-sub headings systematically. Make sure that no heading, sub-heading, or sub-sub heading appears all by itself on the last line. Leave no line space after the sub-headings; leave one space before.

Numbering and spacing of headings

Sections, sub-sections and sub-sub-sections are numbered uniformly in Arabic numerals. Leave two spaces after the end of the numbering and beginning of heading text. Flush left all paragraphs that follow after section headings. No indentation and leave 6pts space above paragraph.

List of Items

Lists may be laid out with each item marked by a bullet (dots only):

- Item one each item marked by a bullet (dots only)
- Item two each item marked by a bullet (dots only)

Leave 6pt space before and after bullets. Alternatively, items may also be numbered in lowercase Roman numerals:

- (i) item one each item marked by a bullet (dots only)
- (ii) item two each item marked by a bullet (dots only)
 - (a) lists within lists can be numbered with lowercase alphabets
 - (b) second item each item marked by a bullet (dots only)
- (iii) item three each item marked by a bullet.

Equations

The equations are typeset in 10pt size, centered. Equation numbers must appear right aligned. (see Eq. 1). Displayed equations are to be centered on the page measure and have at least 8pt empty space above and below the equations. Displayed equations should be numbered consecutively in the paper, with the number set flush right and enclosed in parentheses, as below:

$$F t = \frac{\sum_{i=1}^3 S_i + \sum_{i=1}^3 S'_i}{\frac{S_0 + S'_0}{F/(m_1 + m_2)g}} \quad 1.1$$

Equations should be referred to in the text in abbreviated form, e.g. “Eq. (1)” or “Eq. (2)”.

Conventional symbols should be adopted and used consistently. There is no constraint on use of units. Standard English letters like ‘x’ are to appear as x (italicized) in the text if they are used as mathematical symbols. Punctuation marks are used at the end of equations as if they appeared directly in the text.

1.4 | Figures and photographs

Figures are to be inserted into the text nearest its first reference. The text in the figures should be large enough so that the text is reasonably readable. Authors are advised that all photographs will be finally reproduced in grayscale/black and white. Please use the commands as follows the place the figure.

The preferred graphics are tiff and **Encapsulated PostScript, eps in short**, for any type of graphic. Our T_EX installation requires eps, but we can easily convert tiff to eps. Many other formats, e.g. pict

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(Macintosh), wmf (Windows) and various proprietary formats, are not suitable. Even if we can read such files, there is no guarantee that they will look the same on our systems as on yours.

Next adjust the scaling of the figure until it's correctly positioned, and remove the declarations of the lines and any anomalous spacing. If instead you wish to use some other method, then it's most important to leave the right amount of vertical space in the figure declaration to accommodate your figure (i.e. remove the lines and change the space in the example).

A figure is obtained with the following commands

```
\begin{figure}[b]
\def\xepsfxsize{30pc} - Width of the figure.
                        Please don't delete this line.
                        Mention the size in pica/points, in, cm, mm, etc.
\figurebox{}{}{P053f01.eps} - Place the ".eps" files in the
                            same folder where "paper.tex" resides.
\caption{Changes in information technology in construction.}
\label{fig1}
\end{figure}
```

Leave one line space before and after the figure caption [Figure 1](#). Leave one line space between the text and start of the figure. Figures are to be placed closest to where cited, but definitely within the same section as called. Figures must be anchored to move with the text and be sequentially numbered in Arabic numerals. The 9pt font figure caption must be placed below the figure. Figure should be placed top and bottom of the page. Please prepare the figures with suitable resolution in high resolution (300 dpi) for half-tone illustrations or images. Half-tone pictures must be sharp enough for reproduction.

Figures must be anchored to move with the text and be sequentially numbered in Arabic numerals. Short line captions will be left align to the figure measurement with a line below the figure, while the long-captions must be justified. Whereas every effort should be made to place figures within a single column, larger sized figures may span across both columns by inserting suitable section breaks. Please ensure the figures and the labels with reasonable size and for clear visibility. All authors must testify that their tables and figures are their own works, previously published figures **must** be accompanied by a written permission from the author and **publisher**.

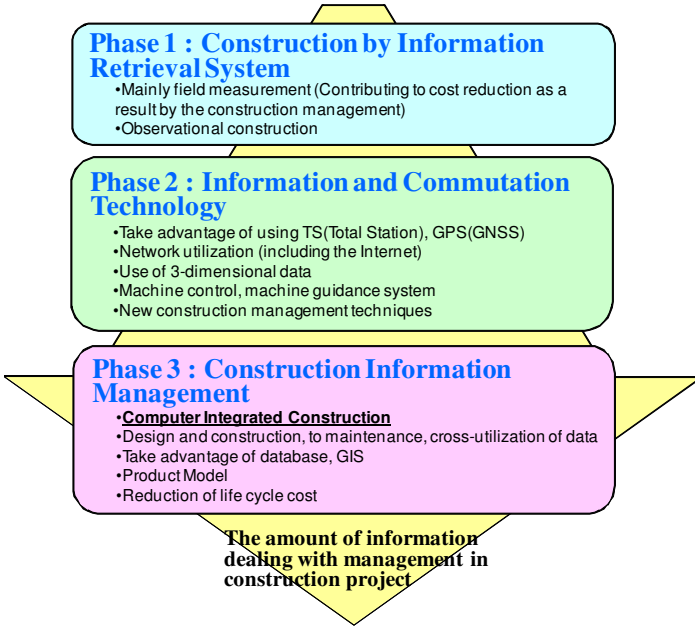


Figure 1.1 | Changes in information technology in construction.

1.5 | Tables

Tables should be inserted in the text as close to the point of reference as possible, and definitely within the same section. One line space should be left above and below the table; also keep one line space after the text and start of the table caption. Tables should be numbered sequentially in the text in Arabic numerals. (see Table 1).

Table 1 | This is the caption for this table in font 9pt. Caption must be align to the left of the table and to the table measure.

Year	Height of Dam (m)	Width at Base (m)
1200	10	50
1350	15	70
1625	17	90
1865	25	119
1950	30	135
1625	17	90
1865	25	119
1950	30	135
2006	39	155

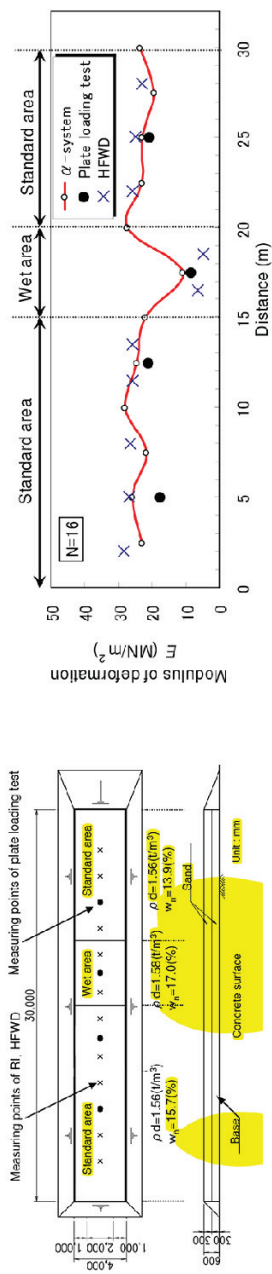


Figure 1.2 | Changes in information technology in construction. Changes in information technology in construction. Changes in information technology in construction.

```

\begin{sidewaysfigure}
\def\xepsfxsize{30pc}
\figurebox{}{}{P053L01.eps}
\caption{Changes in information technology in construction.}
\end{sidewaysfigure}

```

The table captions must be in 9pt. If tables need to extend over to a second page or column, the continuation of the table should be preceded by a caption, e.g. “*Table 1 (Continued)*”. The text inside tables should be in 9pt. Whereas every effort should be made to place tables within a single column, larger sized tables may span across both columns by inserting suitable section breaks. In all events, tables must be anchored to move with the text.

Landscape tables and figures can be typeset with following environments:

- `sidewaystable` and
- `sidewaysfigure`.

Very large figures and tables should be placed on a page by themselves, i.e. in full page center to the page. After rotational of the float of the sideways may not fit into the page visuall and may appear at the outside of the page. You may wish to increase or reduce the `\vspace*`{ } in the first line within the float environment to fit into center of the page. Rest of the items, like References etc. please use the style size as provided in the sample typeset using as a tempalte.

1.6 | Conclusions

Soil stiffness evaluation equipment “Alfa-system” using the response acceleration of vibratory roller was developed and its applicability was verified.⁽¹¹⁾ This paper described the verification results. Alfa-system has been in operation in the construction of the second-phase airport island of the Kansai International Airport and the development of roadbed and subgrade at Kobe Port Island.

Table 2 | Intelligent compaction systems with various formulae. Intelligent compaction systems with various formulae. Intelligent compaction systems with various formulae.

Vendors	IC system	Accelerometer	Unit	Measurement and analyzing method
Caterpillar	CMV	Yes	None	$\text{Geodynamik CMV} = C \left(\frac{A_{2\Omega}}{A_{\Omega}} \right)$ $MDP - P_g - WV \left(\sin \alpha + \frac{a}{g} \right) - (mV + b)$
Dynapac	CMV	Yes	None	$\text{Geodynamik CMV} = C \left(\frac{A_{2\Omega}}{A_{\Omega}} \right)$ $\text{Bouncing Value} = \frac{A_{0.5\Omega}}{A_{\Omega}}$
Ammann	ks	Yes	MN/m	$ks = 4\pi^2 f^2 \left(md + \frac{m_r \gamma_t \cos(\varphi)}{A} \right)$
Obayashi-Maeda	Alfa	Yes	MN/m ²	$Ft = \frac{\sum_{i=1}^3 S_i + \sum_{i=1}^3 S'_i}{S_0 + S'_0} \frac{F}{(m_1 + m_2)g}$ $E = \frac{2 \cdot (1 - \nu^2)}{\left(\frac{4}{3} \cdot Ft + 1 \right) \cdot (2\pi f_0)^2 \cdot m_2}$ $\frac{1 - 0.32 \alpha + \sqrt{0.1024 \alpha^2 - 1.64 \alpha + 1}}$

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