EVOLUTION AND APPLICATION OF COST AND SCHEDULE RISK MANAGEMENT ON COMPLEX PROJECTS

KEITH MOLENAAR

[1]*Dept Civil Engineering, University of Colorado, Boulder, USA*

The abstract should summarize the context, content and conclusions of the paper in between 125 and 225 words. It should tell the reader what the research was about, how it was undertaken, and what was discovered in one or two sentences. It should conclude with one sentence on the most important consequence of the work. It should not say how the paper is organized (i.e., you should write about the research, not about the paper or the act of writing it). It should not be a table of contents in prose, or an introduction. It should not contain any references or displayed equations. Typeset the abstract in 10pt Times New Roman with exact line spacing of 11pt, and margins of 39.62mm (1.56 in.) on the left and right margins. Suggest approximately 6–12 keywords for indexing purposes (separated by commas) as below.

Keywords: Keyword1, Keyword2, Keyword3, Keyword4, Keyword5, Keyword6. (Sentence case. No word that is in the title should be repeated in the keywords).

1   GENERAL APPEARANCE

Contributions to any ISEC conference or publication are to be in American English. Authors are required to submit their manuscripts both in MS-WORD and PDF formats, and should check their formatting (as per guidelines below) before submission. The CTA (Copyright Transfer Agreement) MUST be submitted at the same time as your manuscript. Though a copy editor will review the paper, all authors must submit camera-ready manuscripts. Editors have the right to edit and modify the manuscript and title to suit the ISEC style and guidelines.

2   THE MAIN TEXT AND IMPORTANT CONSIDERATIONS

The text is to be typed in 11pt Times New Roman, single-spaced. The trim size is 245 mm (height) x 171 mm (width). All text area dimensions are 211 mm long and 137 mm wide. The entire text is in a single column format. See headers and footers in this document for content and format style (insert as is). Final pagination and insertion of running titles will be done by the publisher, but add page numbers for now to show the length of your manuscript. Authors are encouraged to use MS-WORD (.doc or .docx).

2.1   Margins on All Sides

Use US letter size paper 215.9 mm (width) x 279.4 mm (height), with a 31.75 mm (1.25 in.) margin, all around.

2.2   Brief Instructions on Sentence Style, Punctuation, and Grammar

Authors are encouraged to have their contribution checked and reviewed for grammar and American spellings. <u>Two spaces MUST be left after the period of each sentence, and after a colon</u>. Integers ten and below are to be spelled out. *Italicize foreign language phrases (e.g., Latin, French).* Use American conventions of commas after i.e., and e.g., but not after etc., unless etc. comes at the end of a subordinate clause. Put periods and commas outside quotation marks that "enclose subordinate clauses", but "If it is a complete sentence, keep the period inside the quotation marks."

3   MAJOR HEADINGS

1st order headings should be typed in boldface in Upper Case; 2nd order headings should be boldface in Title Case; 3rd order headings should be italicized in Sentence Case. Avoid "widows," i.e., section heading coming on the last line of a page; and avoid "orphans," i.e., a single short line on the top of a page. Leave only a 6pt line space after all headings; leave one line space before.

3.1   Subheadings for Use in Paper (2nd Order Headings)

All 2nd order headings should be typed in **boldface**. Use Title Case. Leave 6pt additional line space after the sub-headings; leave one space before.

3.1.1   *Sub-subheadings for use in paper (3rd order headings)*

Typeset 3rd order headings in ***boldface italic*** and capitalize the first letter of the first word only, i.e., Sentence Case. Number the sub-subheadings systematically.

3.1.2   *Numbering and spacing of headings*

Sections and sub-sections are numbered uniformly in Arabic numerals. Leave four spaces between the numbering and the heading. Flush left the first paragraph after section headings.

<u>Indent (by 0.25 in.) subsequent paragraphs in your sections, sub-sections, and sub-subsections to offset them from previous paragraphs.</u>

3.1.3   *List of items*

Lists may be laid out with each item marked by a bullet (dots only), by a number, or in lowercase Roman numerals. Example:

- Item one item one item one
- Item two item two item two item two item two item two item two item two item two Item two item two item two

Leave 6pt space before and after each bullet item. They can also be rendered with Arabic integers or Roman numerals (i, ii, iii, iv, etc.). Example:

(i) Item one

   (a) numbered lists within lists can be listed with lowercase alphabets

   (b) second item

(ii) Item two

3.1.4 *Equations*

The equations are typeset in 10pt size, centered. Equation numbers must appear right aligned with open and closed parentheses without the abbreviation Eq. included—see for example Eq. (1) below. In MathType please set the font size to 10pt by selecting the MathType menu "Size" > "Define". When the "Define Sizes" dialog appears, set the value for "Full" as 10pt. Equations should be referred to within the body text in abbreviated form, e.g., Eq. (1) or Eq. (2). Displayed equations are to be centered on the page measure and have 8pt empty space above and below the equations. Displayed equations should be numbered consecutively in the paper:

$$\mu(n,t) = \frac{\sum_{i=1}^{\infty} 1\left(d_i < t, N(d_i) = n\right)}{\int_{\sigma=0}^{t} 1\left(N(\sigma) = n\right)d\sigma} \tag{1}$$

Conventional symbols should be adopted and used consistently. There is no constraint on use of units. If they are used as mathematical symbols, standard English letters like x are to appear as *x* (italicized) in the text.

4 FIGURES AND PHOTOGRAPHS

Figures are to be inserted into the text nearest its first reference, and must be referred to within the body of the text preferably before the figure appears. The text in the figures should be reasonably readable, no smaller than 9pt, and preferably in Times New Roman.

Figure captions go below the figure in 10pt Times New Roman. See Figure 1 for an example. Do not put the figure caption in bold or italics. Leave one line space before the figure and after the figure caption. Leave 10pt space between the figure and the caption. Figures must be anchored to move with the text and be sequentially numbered in Arabic numerals. Do not make figures within text boxes. Figures and captions should be separate objects. Do not wrap text around figures. Figures can be placed side-by-side in the same horizontal line. The figure caption should end with a period.

All authors must testify that their tables and figures are their own works. Previously-published figures must be accompanied with written permission from the author and publisher and cited accordingly in your submission.
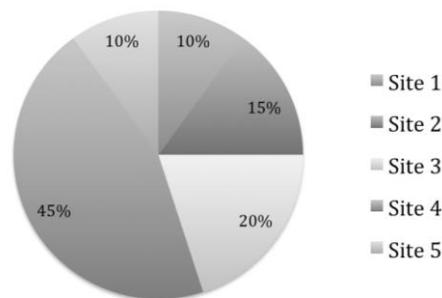

Figure 1. This is the caption for the above Figure in font 10pt. The caption must be centered.

5 TABLES

Tables should be numbered sequentially in the text. Captions are to be centered above the tables. Tables should be inserted in the text as close to the point of reference as possible. See Table 1.

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. The table caption should end with a period.

Table 1. This is the caption for this Table in font 10pt. The caption must be centered.

Year	Height of Dam (m)	Width of base (m)	Comments
1200	10	50	-
1625	17	90	-
1865	25	119	-
2006	39	155	-

Table captions must be in 10pt Times New Roman. 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 not be less than 9pt. Large sized tables may span across both columns. Tables must be anchored to the text.

6   QUESTIONS

Please first consult the ISEC website and the set of guidelines you are now reading. If your question is still not answered, kindly contact *isec.sec@gmail.com*.

7   COPYRIGHT TRANSFER AGREEMENT (CTA)

The CTA, available at the ISEC website, MUST be manually signed and submitted along with the submission of the paper.

8   PUBLICATION AND REGISTRATION

Each submission (up to two papers per author) will require payment of registration fee before the paper can be published in the conference proceedings. Registration must be made online at the ISEC website using a credit card or PayPal account. Wire transfer, bank draft, and international money order facilities are also available. Fee discounts are available for early submissions, so check the ISEC conference page.

9   FOOTNOTES

Footnotes must be numbered sequentially; select footnotes at the bottom of page by going *Insert* → *Footnote* in your MS-WORD software.[1]

10 MANUSCRIPT LENGTH AND TITLE

The maximum number of pages permitted is **SIX**. The minimum is FOUR pages. If the manuscript is only 4 pages, the text should be more than 67% of the fourth page. The title should be less than 15 words in length. All efforts are necessary to ensure that the title does NOT have a country/region name as per ISEC editorial policy. If country names exist in the title, these may be deleted by the editors. If the manuscript carries over to more than 6 pages, during the copy-editing phase, the editors will shorten the manuscript by removing text. The author accepts that it

---

[1]This is a sample footnote. Aim to keep all footnotes within two to three lines. Footnotes take up valuable space, so use them sparingly. The footnote should be in 8pt font.

may not always be possible to send the manuscript back to the author during the rush of copyediting, and therefore accepts elimination of text to bring the manuscript to SIX properly-formatted pages.

11 MANUSCRIPT SUBMISSION

The manuscript must be uploaded to the ISEC website at https://www.isec-society.org/ISEC_09/abstractsAndPapers/. Authors will need to log in with the username and password they have created. Submit three items: a WORD document, a PDF, and the CTA. Kindly adhere to the submission deadlines. The CTA must be physically signed.

Acknowledgments

This section and its heading (unnumbered) should be in 10pt and come before the appendices and references. Dedication and funding information may also be included here.

Appendix A. The Relation Between *R* and *V*

Appendices should be used only when absolutely necessary. They should come before the References. If there is more than one appendix, label them alphabetically. Number the displayed equations occurring in the Appendix in this way, e.g., (A.1), (A.2), etc.

$$\frac{S_R(f)}{R^2} \cong \frac{\alpha_H}{nV_{\text{eff}}} \frac{1}{f^k} \, . \tag{A.1}$$

$$\mu(n,t) = \frac{\sum_{i=1}^{\infty} 1(d_i < t, N(d_i) = n)}{\int_{\sigma=0}^{t} 1(N(\sigma) = n)d\sigma} \tag{A.2}$$

References

References appear as a list at the end of the manuscript, while Citations refer to those References within the body of the manuscript. **Any Reference *not* cited in the text will be removed from the Reference list during the editing process.** Papers with no References and Citations will be returned to the author or not accepted for publication during production stage.

   Citations are rendered within the text as follows: Singh and Shoura (2006) and Cheung (2007)—using the last name of the author and the publication year. An author publishing more than once in a year will be rendered as (Smith 2013a) and (Smith 2013b). When multiple citations are used at the end of a sentence or within parentheses, enter them like this: (Newnan 1983, Yazdani 2001, Vimonsatit *et al.* 2011); order them by year of publication. Court cases must be *italicized* when cited in the text, like *Drennan v. Star Paving Co.* Examples of Reference styles:

For Journal Papers:
Singh, A., Smith, H., and Shoura, M. M., Evaluation of Change: A Case Study, *International Journal of Project Management*, Elsevier, 24(4), 337-348, May, 2006.

For Books:
Cheung, S. O., *Co-operative Contracting in Construction*, Hong Kong Press, Hong Kong, 2007.

For Proceedings Papers:

Yazdani, S., Damage and Preloading in Concrete, *Creative Systems in Structural and Construction Engineering*, Singh, A. (ed.), 995-998, Balkema, Netherlands, 2001.

Vimonsatit, V., Wahyuni, A., and Nikraz, H., Behavior and Strength of Concrete Beams, in *Structural Engineering*, Smith, S. and Jones, T. (eds.), 747-751, Stanford Univ. Press, 2011.

For Acts and Statutes:

Safety Improvement Act of 1999. Pub L. No. 106-159. 113 Stat. 1748 15 U.S.C. § 1414 (2006).

For Court Cases:

Double AA Builders, Ltd. v. State Construction L.L.C., [2005] 210 Ariz. 503, 114 P.3d 835.

Drennan v. Star Paving Co., [1958] 51 Cal.2d 409, 333 P.2d 757 Supreme Court of California. United States vs. Delgado, 545 F.3d 1195 (9th Cir. 2008).

For Electronic Sources:

Bernstein, M. J., 10 Tips on Measuring Statistical Lags, Kotaku.org, June 13, 2009. Retrieved from www.kotaku.org/10tipsonmeasuringlags.php on October 3, 2013.

STATPERFECT Software, retrieved from www.statperfect.or.kr on May 2013.

The Reference list is unnumbered and should appear in alphabetical order by last name. Type all References in continuous format (i.e., do NOT separate them into groups of journal papers, books, proceedings, etc.) in 10pt Times New Roman with exact line spacing at 11pt. *Publication titles are italicized*, articles within them are not. For journal names, you may use standard abbreviations to save space. All manuscript titles and journal names should be in Title Case. Indent references as shown above.