

Title

Author1, A.B.

Organization 1, City, State, Country

Author2, C.D. and Author3, E.F.

Organization 2, City, State, Country

Author4, G.H.

Organization 3, City, State, Country

Copyright 2013 ARMA, American Rock Mechanics Association

This paper was prepared for presentation at the 47th US Rock Mechanics / Geomechanics Symposium held in San Francisco, CA, USA, 23-26 June 2013.

This paper was selected for presentation at the symposium by an ARMA Technical Program Committee based on a technical and critical review of the paper by a minimum of two technical reviewers. The material, as presented, does not necessarily reflect any position of ARMA, its officers, or members. Electronic reproduction, distribution, or storage of any part of this paper for commercial purposes without the written consent of ARMA is prohibited. Permission to reproduce in print is restricted to an abstract of not more than 200 words; illustrations may not be copied. The abstract must contain conspicuous acknowledgement of where and by whom the paper was presented.

ABSTRACT: The abstract should be brief – one paragraph of between 150 to 200 words. It must clearly describe the most important contributions of your work. The abstract must be typeset in 10 pt Times New Roman font.

1. SUBMISSION AND TEMPLATE DETAILS

Initial papers must be submitted in Microsoft Word .doc or .docx format (using this template) and must be submitted by 15 February 2013. All final papers must be submitted by 1 May 2013 in order to be included in the Proceedings CD and must be submitted in .pdf format – this instruction is available on the conference website www.armasymposium.org. Full delegate registration by at least one of the authors must be made by the time of the final paper submission – papers for which no delegate payment has been received will not be included in the program or the proceedings.

Please remember to put your paper number at the top of the header as follows:

ARMA 13-paper number

Your paper number is the same as the ID number assigned to your abstract and can be accessed via the paper submission site below.

Please submit your paper electronically through the 47th US Rock Mechanics / Geomechanics Symposium 2013 paper submission website found at <https://security.gibsongroup.ca/arma/abstract-submission.php> (or use the link available through

www.armasymposium.org as was done with the abstract submission).

If you have any problems posting your paper, please email adminarma2013@gibsongroup.ca.

Technical committee issues should be emailed to ARMA2013techcommittee@gibsongroup.ca.

This template is provided as a pre-formatted Word file. All the major components of a paper (headings, table and figure captions, reference text, etc.) are implemented as styles in this file. Using the styles in this file makes formatting easier.

To view the styles in the file, right-click any toolbar and then select the Format toolbar from the ensuing shortcut menu. You can view the different styles by clicking the drop-down button beside the style box.

If the styles box is not visible on your Format toolbar, you can display it using the following means:

- Right-click on any toolbar
- Select the Customize option at the bottom of the ensuing shortcut menu
- Select the Commands tab
- Select the Format option under the Categories section
- Select the style box and click the Close button

While bold typeface has been used in this template example to denote emphasis for critical instructions, bold should not be used in a final submission.

Authors are encouraged to pay particular attention to the quality of English in the submitted paper, especially if English is not their first language. Failure to do so may jeopardize acceptance of the paper.

2. MAIN TEXT

The main text in the paper should be typeset in 11 pt Times New Roman font with single-line spacing. Text should be full justified.

The text of the paper should cover an area that has a width of 8 inches (203.2 mm) and height of 11 inches (279.4 mm). Each column must have an exact width of 3.5 inches (89 mm) and your two columns must be separated by a space of 0.3 inches (7.6 mm).

In the text, references must be listed in the order in which they are encountered. They must use the style [1], and must be placed before punctuation marks [2, 3], using square brackets.

Please use SI units in the text. You may add the corresponding imperial units in parentheses if you so desire. As an example you may write the following: the width of the opening was 15 m (16.4 yd). To avoid possible misreading, use the following notations for numbers:

- Write 1.7 instead of 1,7
- 1700 instead of 1,700
- For numbers with four or more digits use commas, e.g. 17,000 instead of 17000.

Because the papers will be published on a CD rather than paper hardcopy, there is no page limit; however, papers that are six to ten pages in length are customary for this type of symposium.

3. MAJOR HEADINGS

Major headings should be typeset in 12 pt Times New Roman capitalized font. Using this template file, major headings can be formatted with the Level1Heading style.

3.1. Sub-Headings

Sub-headings should be typeset in 12 pt Times New Roman italics, with the first letter of every important word capitalized. Sub-headings can be formatted using the Level2Heading style in this file.

3.2. Numbering

All sections and sub-sections must be numbered in Arabic numerals.

3.3. Lists

You may list items in your paper using either bullets:

- Item No. 1
- Item No. 2

Or Roman numerals:

- (i) Item No. 1
- (ii) Item No. 2
 - (a) Lists within a list can be numbered with lowercase Roman letters
 - (b) Item No. 2

4. EQUATIONS

Equations displayed in your paper should be numbered sequentially, with an equation centered in the middle of a column, and its number set flush to the right edge of the column and enclosed in parentheses as shown below:

$$\sigma_{xx} = \frac{G\beta}{2(1-\nu)} \quad (1)$$

$$\beta = \frac{D_{xz,i-1} - D_{xz,i+1}}{2l} \quad (2)$$

In the text of the paper, equations may be abbreviated in forms such as “Eq. (1).”

5. FIGURES

The term “figure” denotes graphical representations including charts, graphs, drawings, photographs, etc. Figures must be inserted as close as possible to their first reference. Figures must be numbered consecutively and must have descriptive titles placed just below them. Figure captions must be typeset in 10 pt Times New Roman.

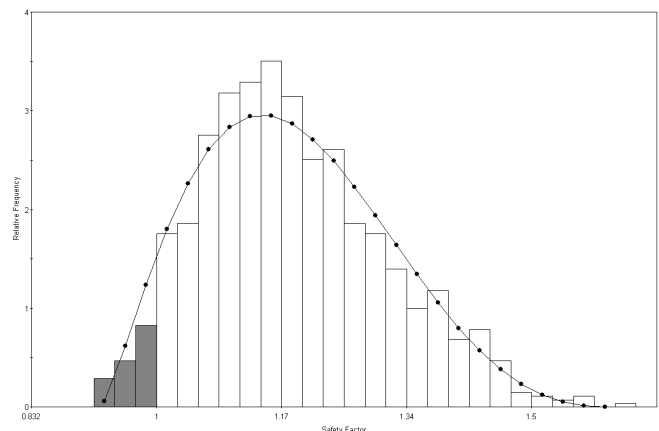


Fig. 1. Probability of failure of the sample wedge.

If photographs are being inserted, color or black and white is acceptable. Large figures or tables may straddle both columns.

6. TABLES

In the text, tables must be inserted as close to the first point of reference as possible. Please leave some space above and below the table. Tables must be numbered sequentially in the text with Arabic numerals.

Captions must be centered above tables. Tables and table captions must be typeset in 10 pt Times New Roman font.

Table 1. Sample tables with values

	1	2
3	57	86
4	107	100
5	113	125
6	161	176

REFERENCES

References must be listed in the order in which they are encountered in the text of the paper. References must be typeset in 10 pt Times New Roman and must use the following style [1]. They must be placed before punctuation marks in the text [2, 3], using square brackets.

Examples of Reference Citations:

Please note that the first author's name is given in reverse order (last name, initials) while the names of the other authors are given in normal order.

- Reference to a journal article
 1. Hazzard, J.F., R.P. Young, and S.C. Maxwell. 2000. Micromechanical modeling of cracking and failure in brittle rocks. *J. Geophys. Res.* 105: 16,683–16,697.
- Reference to a book (monograph)
 2. Crouch, S.L. and A.M. Starfield. 1983. *Boundary element methods in solid mechanics*. 1st ed. London: George Allen & Unwin.
- Reference to a chapter in a book
 3. Fandell, C.N., L. Guest, H.M. Smith, and Z.H. Taylor. 1976. Achieving purity in your sampling techniques. In *Geotechnical Engineering Practices*, ed. J. Schwartz, 23–67.
- Reference to a published paper in proceedings
 4. Vijaykumar, S., J.H. Curran, and T.E. Yacoub. 2001. Node-centric displacement discontinuity method for plane elasticity problems. In *Proceedings of the Tenth International Conference on Computer Methods and Advances in Geomechanics, Tucson, 7 – 12 January 2001*, eds. C.S. Desai et al, 163–168. Rotterdam: Balkema.