DFI PAPER WRITING AND FORMATTING GUIDELINES

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ABSTRACT

Deep Foundations Institute offers these recommendations for preparation of a technical paper. The aim is to assist authors in writing a paper as well as to ensure a reasonable degree of uniformity of format and style between papers published in Proceedings Volumes associated with DFI meetings, seminars and conferences, or for publication in DFI's *Deep Foundations* magazine, *DFI Journal* or other publications. Following these recommendations should also minimize formatting changes after acceptance of the paper. Grateful acknowledgment is offered for the contribution of Bengt H. Fellenius, DFI member and Professor Emeritus of the University of Ottawa. His paper, written many years ago, entitled "Instructions for Preparing a Manuscript" is the backbone of this document.

Keywords: guideline, recommendation, instruction

KEYWORDS

As shown above, immediately following the Abstract, add keywords in Bold Type, Times New Roman Font, size 10 pt.

MANUSCRIPT LENGTH

The length of the paper is limited to a maximum of 10 pages, excluding references. Failing special arrangements having been made, over length papers may not be included in the proceedings or may be returned for additional editing to meet length standards.

FORMAT

The paper size should be letter size - 8.5 x 11 in. The margins must be 1.0 in (25 mm) top, bottom, left and right.

The text must be arranged in a **single** column format (as presented here) and must be **justified**. Paragraphs should be formatted using single spaced lines (as used herein).

The first line of every paragraph should be flush with the left margin; use no starting indent. Separate paragraphs by a blank line.

The Times New Roman font, size 11 pt. should be used unless noted otherwise.. Please provide the file electronically by upload to the Conference online peer review site.

Apply “orphan control”. That is, avoid having the last line of a paragraph alone on top of a page by breaking the page one line earlier on the preceding page. Avoid, also, having the first line of a paragraph alone on the bottom of a page by breaking the page at the beginning of the paragraph.

Do not include page numbers in your document since the proceedings volume of the conference will number the pages contiguously. Moreover, do not use any headers, footers, or footnotes.

Finish each sentence with one space after the period.

TITLE AND AUTHOR NAMES

Each paper must begin with the title written in uppercase letters, Bold Type, Times New Roman Font, size 12 pt. and left justified on the first line (do not leave any blank lines at the top of the page). If necessary, more than one line may be used for the title, but the overall length of the title should not exceed 90 characters including spaces between words.

The author(s) name(s), affiliation, City, State, Country, Phone number and Email address must be written, left justified after a blank line below the title in Times New Roman Font, size 11 pt. Do not include zip/postal codes. If two authors have the same affiliation, write it for both authors even if it would be a repeat. Use the format of first name, initials of second (and third, etc.) name and then the family name with only the first letter of every word capitalized. For example, "Julius G. Caesar". Customary Chinese style, three-word names written with family name first can be written out in full.

Paper abstract should follow the author names, starting with the word Abstract in bold as shown above.

ABSTRACT

Paper abstract should follow, one line below the author name(s), starting with the word ABSTRACT in bold font on the same line as the text as shown above. The abstract should be written in one paragraph and contain no more than 200 words. It should state the objective of the paper and report the results and main conclusions resulting from the work.

HEADINGS

Use headings to separate sections of the paper. All headings should be in bold type letters. The headings need not be numbered. Primary Level headings should be uppercase. Second Level headings should be italicized and in title case (first letter in uppercase and following letters in lowercase). If a second level heading follows directly below a primary heading, no blank line is necessary between the two.

TABLES

Tables (see example following) should be placed in the text after and in immediate connection to where they are first mentioned. To avoid splitting them between pages, their insertion may be delayed, but not advanced. The table heading should be placed above the table in Bold Type letters. Number the tables starting from "Table I". When referring to a table in the text, for example the second table, write "Table 2". Provide a blank line above and below each table.

Table 2. Befuddlement Factor, $\beth$ for sand based on soil density and effort level

Effort Level: Soil Density	Low	Average Befuddlement Factor	High
Very Loose	0.03	0.07	0.34

Loose	0.02	0.04	0.28
Medium	0.01	0.02	0.12
Dense	0.00	0.01	0.07
Very Dense	0.00	0.00	0.05

FIGURES AND PHOTOS

Figures should be placed in the text after and in immediate connection to where they are first mentioned. Their insertion may be delayed until the next page, but not advanced. Often, placing the figure at the bottom of the page makes for the best appearance. The alternative is to group all graphics and photographs as an addendum following the text. In this case, the illustrations should appear in the order of mention and be captioned with sequential figure numbers, which are referenced at the appropriate places in the foregoing text.

The figure caption should be placed below the figure. Number the figures starting from "Fig. 1". When referring to a figure in the text, write "Fig. 2" but when starting a sentence with “Fig. #”, spell out the word Figure. When referring to several figures, write Figs. #-###, or Figures #-###.

Use computer-generated graphs or diagrams for the figures. Make all lines thick (heavy; wide) and the lines in the graph about twice as thick as the width used for the axes in the diagram.

Figures can be framed (as shown in the example following) or not framed, but be consistent. The desired resolution for figures is 300 dpi minimum. When possible, figures meeting this quality requirement should be provided. Provide one blank line above a figure and a blank line below the figure caption.

Lettering and labels in a figure must be legible, which means written in proper letter size. A reference rule is to prepare the main texts of the figure using letters and symbols of a height of at least 2.0 percent of the longest side. Moreover, when a figure has been inserted into the manuscript, ensure that no letter has a smaller height than 1.0 mm. Use same size and type fonts for all labels of similar nature. Non-serif fonts (Arial) letter types are preferred over serif fonts.

Photographs should be referred to as “figures”, e.g. “as shown in the Fig. # photo”.

Use color to separate lines and symbols or to emphasize information. However, consider that people with color vision impairment cannot see pale colors, such as yellow, light green, etc. Pale colors also make a hard copy printed in black-and-white harder to read.

The following figure contains much text that may or may not be necessary. Generally, the amount of text labels should be as little as possible. The axis titles can be in all uppercase letters or just capitalized.
The figure caption should be short and not duplicate the information given in the text. The caption to the following figure is intentionally long in order to show how to manage a caption written in more than one line.

The figure caption should be in a sans serif font and should be in bold face (such as Arial 10 pt bold).

The figure caption should be preceded by the “Fig. X” as shown in example below**.**

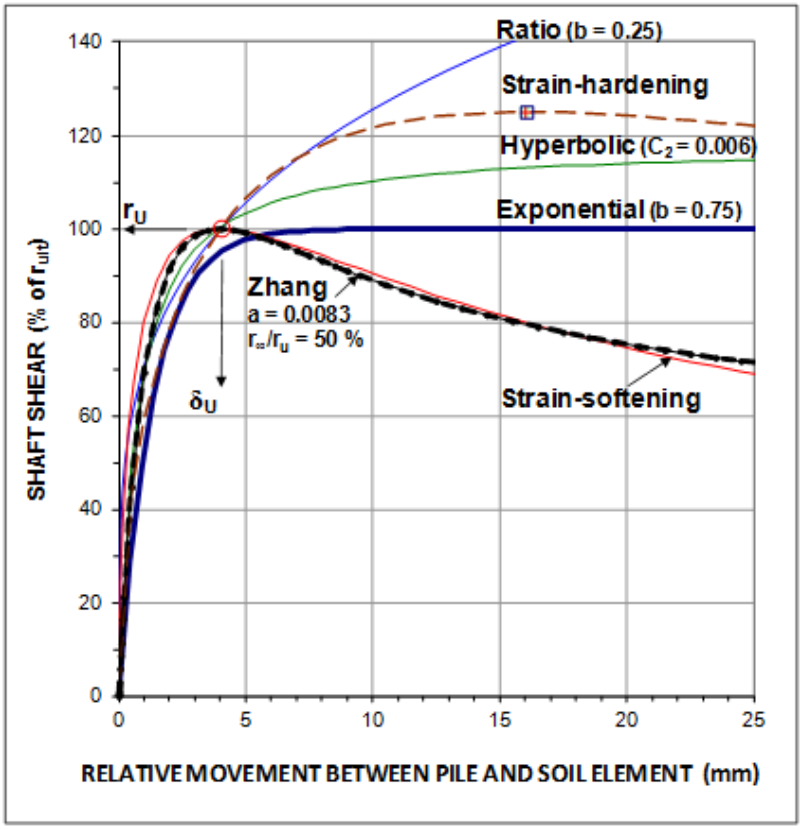

Fig. 1. Six t-z or q-z functions with a common 100% ultimate resistance value for a movement of 4 mm. The strain-hardening and strain-softening curves are calculated according to the Hansen 80-% method

EQUATIONS

For maximum clarity, equations should be written with the reference number inside square brackets, right justified as shown below on the same line as the equation. The equation legend is then written below the equation.

$$Q = \frac{\sqrt{\delta}}{C_1\delta + C_2} \qquad [1]$$

Where Q = applied load, δ = movement, C_1 = slope of the straight line in the √δ/q versus movement diagram, and C_2 = y-intercept of the straight line in the √δ/q versus movement diagram.

Leave one blank line before and after each equation.

DEADLINE FOR RECEIPT

To enable a paper to be included in the proceedings volume and presented to the conference, the file must have been received by the date requested. Papers failing to meet the deadline for receipt may not be included in the proceedings.

DEFINITIONS, SYMBOLS, AND UNITS

There is quite a proliferation of terms, definitions, symbols, and units used in papers written by the piling community. Not only do the terms vary between authors, many authors use several different words for the same thing in the same paper, which makes the papers difficult to read and conveys an impression of poor professional quality. Review your use and consider if your habitual terms would be better if changed per the suggestions at the end of these Instructions under the heading of “Spelling Rules, Terms, and Special Aspects”.

Rule of thumb is to use consistent units, whether English units or SI units, throughout your paper. If possible, including both units, e.g. 10 ft (3 m) or 3 m (10 ft), is preferable.

Do not use the unit "cm" for linear measure, use "mm" or “m". Note that in the SI-system, the unit for time is second and it is written as "s" not "sec". If the time is measured in hours, the unit is written as "h" not "hr" or "hrs". The SI-unit for mass is "kilogram" (kg), not "gram" and the plural must not be written as "kgs"—it would mean kilogramsecond! Never use "Mg" to mean "1,000 kg"! Note that force is not measured in "kg", but in newton (N), and is abbreviated as needed using multiples of 1,000, e.g., "MN" or "GN”. Stress is measured not in “kg/cm^2", but in "N/m^{2}or Pa”. The denominator should be in the base unit: e.g., N/mm^2 is not acceptable, write MN/m^2 or MPa.

SUMMARY AND CONCLUSIONS

All manuscripts should contain a section discussing the results presented and a summary of the findings and conclusions reached. Sometimes, this section can be split in two separate sections, called, for example, "Summary” and “Conclusions” or sometimes one heading suffices, depending on the authors' preferred style and the flow of the presentation.

The Summary or Conclusion presents, but only very briefly, the background, objectives, and scope of the work presented in the paper and emphasizes the results and the conclusions from the work. Do not write "This paper presents the results from field tests comparing polymorganic piles with monogamic piles and comments on the economics of the new piles". Such a sentence is only descriptive and provides very little useful information. Instead, concentrate on the factual information and give specifics, such as: "Results from full-scale static loading tests to failure loads of about 5,000 KN showed that the stiffness of polymorganic piles was four times smaller than that of monogamic piles. Compilation of construction costs from three projects showed that neither pile type was competitive with conventional wood piles."

ACKNOWLEDGMENTS

People and companies, organizations, etc., who have contributed data, review effort, time, and knowledge, or permission to publish, etc. to the manuscript can be acknowledged at the end of the manuscript immediately before "References".

DFI requires authors using artificial intelligence (AI) tools, such as Large Language Models (LLMs), ChatGPT, Claude, Google Gemini etc., to follow the Committee on Publication Ethics (COPE) position statement on authorship and AI tools. Currently, AI tools do not satisfy DFI's authorship criteria, as they cannot take responsibility for submitted work. Notably, an attribution of authorship carries accountability for the work, which cannot be effectively applied to AI tools. However, AI tools may be used to aid in preparing a conference paper. Specifically, authors who use AI tools in the writing of a manuscript, production of images or graphical elements of the paper, or in the collection and analysis of data are required to do the following.

- Identify the AI tool used and the purpose of using the tool in the Acknowledgements (or similar) section of the paper.
- Cite the sources used to generate content, both those supplied to the AI tool and those used by the AI tool, and include the sources in the list of references.
- Verify the accuracy, validity and appropriateness of content and citations generated by the AI tool.
- Be conscious that the AI tool may reproduce substantial text from other sources and check the original sources to avoid plagiarizing the work of others.

Authors are fully responsible for the content of their manuscript, even those parts produced by an AI tool, and are thus liable for any breach of publication ethics. Failure to include information regarding the use of an AI tool may result in the author's submission being rejected or retracted.

REFERENCES

The References section is placed last in the manuscript. Where previously published literature is referred to, a listing of all references must be compiled at the end of the paper immediately following the summary under the heading of "References".

References in the text

References in the text are cited by the last name of the author(s) followed by the year of publication in parentheses. If more than two authors exist for a paper, use the first author's name followed by "et al.", which words stand for "et al." (It means "and others"). Do not forget the period in "al.".

When the reference is not a noun or an object in a sentence, both the (name) and year(s) are placed in parentheses and separated by a comma.

If there is more than one paper cited within the parentheses, place the references in chronological order and separate them by semicolons.

When reference is made to more than one paper by the same author(s) published during the same year, denote the references by 1984a, 1984b, etc. with "a", "b", etc. determined by alphabetical order from the first word in the title.

If you want to credit a person for a fact or expressed opinion, give name and date in parenthesis, e.g., (Yu Chun Kwong, personal communication Month xy, 20yz). As the information may be a verbal message, a letter, or email, and not retrievable for the public, do not include in the Reference section.

The following are examples of the assigned format for references in the text. Notice how the references are separated by semi colon and comma depending on interrelations and whether all of the reference is inside parenthesis or only the year is within the parenthesis:

Jones (1982) found the obfuscation coefficient, C, to be equal to 1.403.

The results of their study were in agreement with the findings of Herremann (1983), Gragossen et al. (1974), and Laurel and Hardy (1981).

A number of researchers (Lilflickanovitz 1932; Sellers 1957; 1962; Raringen and Gosingen 1974; Churchill et al. 1981; and Zorrocz 1981) have reported similar phenomena.

The findings reported by Wroom (1977; 1981) and Zolac (1976a; 1976b) enabled Pzist and Topf (1983) to formulate the general theory of mudcake activated communal oscillations.

Subsequently, the continued testing had to be significantly expanded to eliminate the consequence of elated shaft excitation on the dynamically sensitive rackare and busar at the site (Fint and Snus 1982; Samt and Synnerligt 1983; Jag et al. 1983).

Reference list

The primary order of listing the papers is alphabetical according to the name of the author (first author, when there is more than one author for the reference). The second order is according to the year of publication. List first an author's single name references and, then, those the author co-authored with others.

Start the reference by the name and initial(s) of the author(s) and then write the year of publication after which a period is entered. Omit the space between initials, i.e., write "A.B." instead of "A. B.". Write the title of the paper without capital letters (but for the first letter) and ended with a period. After the title, write the name of the publication in full followed by volume identification, etc. The page numbers for the first and the last page are written last, or, if there is no pagination or if the reference is to a book by the author (as opposed to a collection of papers by various authors), give the total number of pages of the book. If the paper has no pagination as a part of a longer reference, give the total number of pages of the document.

When a reference is to a publication primarily published on-line (as opposed to just being uploaded on-line), the date it was downloaded or accessed should be indicated.

Note that for reference to a journal issue, the journal volume number is given followed by the issue number in parentheses and the page numbers separated by a dash, whereas the volume number of a conference proceedings published in more than one book are indicated by "Vol. #".

Papers presented to conferences should list the date and in what city the conference was held.

The following is an example of a reference list attempting to cover most of the various types of texts encountered. Notice, for instance, that the references to the ASCE journal reflect the changes made in the name of the journal.

Canadian Foundation Engineering Manual, 1985. Second Edition, Part 1: Fundamentals; Part 2: Shallow Foundations; Part 3: Deep Foundations; Part 4: Excavations and Retaining Structures. Canadian Geotechnical Society, BiTech Publishers, Vancouver, 456 p.

Fellenius, B. H., 1980. The analysis of results from routine pile loading tests. Ground Engineering, Foundation Publishing Ltd., London, 13(6) 19-31.

Fellenius, B.H. 2012. Basics of foundation design. A text book. http://www.fellenius.net/papers. 384 p. Accessed 13-10-22.

Goble, G.G., Rausche, F., and Likins, G.E., 1980. The analysis of pile driving—a state-of-the-art. Proceedings of the First International Conference on the Application of Stress-wave Theory on Piles, Stockholm, September 10-13, H. Bredenberg, Editor, A.A. Balkema Publishers, pp. 131-161.

Holtz, R. D. and Kovacs, W., D., 1981. An introduction to geotechnical engineering. Prentice-Hall Inc., New York, 780 p.

Rausche, F., Moses, F., and Goble, G. 1972. Soil resistance predictions from pile dynamics. American Society of Civil Engineers, ASCE J. for Soil Mechanics and Foundation Engineering, 98(SM9) 917-937.

Massarsch, K.R., 1994. Settlement analysis of compacted fill. Proceedings, 13th ICSMFE, New Delhi, January 5-10, Vol. 1, pp. 325-328.

Smith, E. A. L., 1960. Pile driving analysis by the wave equation. American Society of Civil Engineers, ASCE Journal for Soil Mechanics and Foundation Engineering 86(SM4) 35-61.

Skrivare, L.A.T., 1979. The saturated unit weight of blue bull feathers. Lecture Notes. University of Ottawa, Faculty of Engineering, Department of Civil Engineering, 13 p.

Tavenas, F.A., 1977. Application of the wave equation analysis to friction piles in sand. Canadian Geotechnical Journal, 14(4) 34-51.

Thompson, C.D. and Thompson, D.E., 1978. Influence of driving stresses on the development of high capacities. American Society for Testing and Materials, Symposium on Behavior of Deep Foundations, R. Lundgren, Editor, Special Technical Publication, ASTM STP 670, pp. 562-577.

SPELLING RULES, TERMS, AND SPECIAL ASPECTS

There are two spelling conventions in the English language, American and British: behavior (behaviour), labor (labour), color (colour), harbor (harbour), gage (gauge), neighbor (neighbour), and remold (remould). Also, modeling (modelling), refering (referring), prefered (preferred), traveling (travelling), and controled (controlled). However, occurred and occurring, offered and offering, for example, are spelled the same in both conventions, for reasons of pronunciation and stress. Choose either convention, but be consistent in the chosen one.

There is often confusion about whether to write "z" or "s" in words such as "analyze", "analyzing", "analyzer", "emphasize", "organize", "capitalize", "idealize", "rationalize", "realize", "specialize", "summarize", "symbolize", and "horizontal".
Use the spelling "to advise" and "to practise" and "the advice" and "the practice" (verb versus noun), and omit "e" before "able" in drivability", "desirable", "lovable", "arguable", etc. However, for reasons of pronunciation, the "e" is retained in "serviceability".

A simple and useful distinction of meanings can be made by writing "metre" for distance and "meter" when referring to a measuring device. Similarly, the spelling "programme" as in "testing programme" keeps the meaning apart from "program" as in "computer program".

Write either "centre" or "center", but use the associated correct verb forms: "centred" and "centered", respectively.

Do not use contractions such as “don't” or "can't". Write "do not" and "cannot". Also, write "it is", not "it's" or "its". Besides, "its" is a possessive pronoun that must not be written “it's”.

Do not overuse nouns as adjectives. Four nouns in a row is an abomination. For example, "the concrete pile toe capacity" reads much better if changed to “the toe capacity of the concrete pile" (and, replace the word "capacity" with "resistance" or "bearing").

Do not use the ampersand symbol (&), write out the "and".

Capitalize all months, days, and seasons. Short paragraphs will make the paper more readable. Limit the text to one statement or message per paragraph.

Use plain English and common words rather than fancy expressions, and be concise and avoid lengthy or awkward constructions. Use short sentences. If a sentence requires more than three lines, it is usually better to change it into two sentences.

Think of the literal meaning of words and expressions, to avoid 'ear-sores' such as "up to a depth of 4.5 m." The words "the same order of magnitude" imply a relation of ten! Usually, the intended meaning is better expressed by plain "magnitude" or "size".

Many times, the words “precision” and "accuracy" are confused. An example of "precision" is the reading precision of a gage, the number of decimals given in a value. "Accuracy" considers errors in the gage and in a combination of measurements and calculations. Some authors will write "the accuracy of the measurements was 3%", but they mean "precision".

Do not abuse the word "predict" by using it as synonymous with "calculate", "determine", or "compute". The word "prediction" is an absolute word that requires that the calculation truly was made before the test. True prediction is a rare flower!

Avoid the term "reliability" unless dealing with an analysis based on probabilistic principles. Do not leave a numeral alone at the end of a line. For example avoid a sentence structure with "16 MPa" where the 16 is "orphaned". Use a non-break space command between numerals units for getting "16 MPa" to always be on the same line.

Refer to a pile as, for example, Pile 57, using a capital "P". Similarly, write Day 7, Section 3.2, Site A, Blow 5, Page 9, etc. without use of the term "Number" or its abbreviation "No.". But when you do, write pile No. 57, blow No. 5, page No. 9, etc., without a capital first letter in the 'title word'.

Work on interpunctuation. Commas are important for assisting the understanding of the text and must not be neglected. Use the convention of the "serial comma". Thus, write "red, white, and blue" and Tom, Dick, or Harry with a comma separating each item in the series.

Notice that there is a difference of meaning between “Also, the experiments showed that...” and “Also the experiments showed that...” and use a comma in sentences such as: "In Fig. 16, the traces are ...”. Commas are important.

Consider the life and death importance of whether Caesar's decision about your appeal of mercy reads "Execute, not liberate", or "Execute not, liberate".

Notice also that there is often a difference between similar words. For instance, the words "objective" and "object" are often confused, and the word "anybody" means "anyone". "Anybody" means "any corpse". Similarly, "any one" means "any single person". The words "alternate" and "alternative" have related but different meanings: "Alternate" refers to every second in a series, and "alternative" is one of two possibilities. The word "alternate", but not the word "alternative" can sometimes mean "substitute". The word "substitute" is then to be preferred.

The word "less" is overused. Whenever possible, replace it by its various equivalents, such as "fewer", "smaller", "lighter", "lower", "poorer", etc.

Notice that a verbal message can be spoken or written, heard, or read. If you want to say that the message is spoken, as opposed to written, say "oral".

The word "data" is a plural word. So are also the words "criteria", "formulae", "media", "memoranda", "phenomena", "apparata", as well as "strata". Therefore, also the appertained verb must be in plural form. The corresponding singular words are "criterion", "formula", "medium", "memorandum", "phenomenon", "apparatus", and "stratum".

Puristically, "in-situ" should be written in italics, but hyphenating it provides sufficient distinction. Do not write "insitu", or "in situ".

Prefixes such as "pre-" are normally unnecessary. For example the word "predominant" can often be just "dominant" (and preferably be replaced by words such as "governing", "principal", "leading", etc.).

Avoid tautologies such as "warm heat", "cold chill", and "ultimate capacity". "Capacity" alone is enough. Terms such as "load capacity", "allowable capacity" are incorrect and must not be used.

There is no standard for the common terms "pile head", "pile toe", "shaft resistance"' and "toe resistance". Many other terms for these features are common, such as "pile butt", "pile top"' "pile tip", "pile end", "skin resistance", "skin friction", "end resistance", "end bearing", "tip resistance", etc. Use the first mentioned terms or your own preferred habitual terms, but stay with one set and do not mix terms that refer to the same thing, for example, "tip" and "end".

PRESENTATION AT THE CONFERENCE

For the presentation of a paper or a prepared discussion at the conference, make ample use of visual aids. Try not to read your contribution, but use notes, or better still, take your cue from your visuals. Speak only when facing the audience, that is, point and look at the visual projected on the screen, as necessary, but then stop talking until you have "returned" to the audience.

When presenting a paper, do not try to tell everything that is contained in the paper. Choose one main result or message and concentrate on this one. When the persons in the audience can understand and appreciate the message of the presentation, they will search out the paper to learn about the rest of the information. Cramming too much into the oral presentation will have the effect of turning the audience off; off the presentation, the author, and the paper.

VISUALS

Good visuals can often not be made from the figures used in the paper, because most such figures have too much detail and too small lettering. Redraw your figure and eliminate all extraneous text, such as captions and literature references. As a rule, show only the graphic information you intend to address in the oral presentation and use no more information than can be assimilated in 30 seconds. Then, allow for 2 minutes of presentation time per visual and consider that additional time is needed for information not supported by a visual.

Typically, a presentation assigned 20 minutes total time, barely contains 17 minutes of effective time. Then, if the entire presentation is supported by visuals, there is time for no more than about 9 visuals. Trying to include more than this, easily reduces the efficiency of the presentation and the audience will have difficulties catching the message. This is particularly the case when the speaker is not familiar with the language of the conference. For case history presentations, however, it is possible to effectively include more visuals, as these visuals tend to be self-explanatory and can be shown in more rapid sequence.

Make letters and numbers as large as possible. The minimum text size recommended for figures should be a minimum of 18 pt font. For curves, use wide lines and use large symbols to indicate all plotted points.

Try to avoid using tables in a visual. Most material contained in a table is much more informative if shown in a diagram. When a table just has to be shown, limit the number of lines to 5 and the number of columns to 4.

Projection for PowerPoint Presentations without sound is standard. If special audio-visual requirements are needed, the organizers should be made aware of them as early as possible.

POSTER SESSION (IF APPLICABLE)

A Poster Session gives an author the opportunity to discuss their topic with the conference participants who have a particular interest in the author's paper. However, just pasting up copies of the paper does not make a good Poster presentation. Post a heading showing the paper title and the names of the authors. Prepare enlargements of the figures, which show the main results. List the conclusions of the paper using large letters. While limiting the information posted on the Board, the Poster gives an opportunity to show photographs and figures, which were not included in the paper. Some pertinent results contained in other papers can also be displayed. Perhaps a graph can be posted of some data from the continuation of the work. Avoid showing company promotional material as technical presentations are not to be used as advertisements, but some accompanying background material to the dry data in the paper is certainly not misplaced. DFI will provide specific guidelines and templates for poster session presentations.

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