Mathematical Notation

If you use equations in your paper, it is also possible to cite special mathematical notations for your variables. To do so, you may use either of two methods: in-text notation (for just a few) or a separate list of notations.

Example of in-text notation:

\[ E=mc^2 \]

where (typed at the left margin)

\[ E \] = energy
\[ m \] = mass
\[ c \] = speed of light

When using separate list notation, a blank sheet should be given the heading “NOTATION” and all mathematical notations used throughout the paper should be defined in the same manner listed above, omitting the equation and the word “where.”

American Concrete Institute (ACI) Journal Manuscript Documentation Style

Introduction

This guide is based upon the ACI Style Manual—2005 and is designed to provide writers with all the necessary information to complete an academic or professional writing project using this citation style. Although most articles submitted for publication to ACI journals will be submitted in fill-in-the-blank electronic formats, academic projects must be formatted manually. This manuscript and documentation style is similar to other lab report formats, and is used mainly for publication of documents on concrete materials, design, and construction. This format is very specific and includes, among other details, titles for each section of the paper, parenthetical documentation, bibliography, specific formatting requirements, and an abstract. If you have questions not covered by this handout, the 2005 ACI Manual can be accessed at http://www.concrete.org/Pubs/2005_ACI_Style_Manual_for_printing.pdf, or is available in hard copy at the Missouri S&T Writing Center, Room 113, CSF.

Formatting

All documents in this format should comply with the following:

- Single column, double-spacing using 12 point Times New Roman font on 8.5 x 11 pages with 1 inch justified margins
- Paper divided into sections with headings clearly marked
- For units of measurement, either US or SI units are acceptable
- Mathematical expressions should be formatted so that:
  - Every symbol is defined with no double meanings
  - Numerals and letters are clearly distinguished
  - Fractions don’t use “/”
  - Equations are numbered and on a separate line from text
Manuscripts require numbered lines, with page numbers at the bottom of each page.

10,000 word maximum, where:
- One page of text counts as 300 words
- One table counts as 400 words
- One figure counts as 200 words

Order of Sections within the Paper

This writing style specifies the order of information in the paper, as follows:
- Title (70 character maximum, including spaces)
- Biography of Authors (75 word maximum)
- Abstract (150 word maximum)
- Keywords (list a maximum of 9 important terms used in your paper) - they are used for retrieval and indexing
- Introduction
- Significance of the Research (100 word maximum) - included in the body of the paper, identifies the significance of the work to the scientific community
- Experimental Procedure—includes materials and specimens used and lab/field work and investigation
- Analytical Investigation—may include model development and existing procedure description
- Comparison of Predictions and Experimental Results
- Further Research (if applicable)
- Conclusion(s)
- Acknowledgments to other authors (if applicable)
- Notation, definitions or symbols—describes the symbols and notations used in paper, on a separate page
- **References**—numbered in sequential order of appearance in the text and consist only of published works
- Appendix (all information should be referenced in the text) - used for additional supporting information, extra notation information, and definitions of mathematical expressions and variables
- Tables and Figures (placed at the end of the paper, not incorporated into text; tables are depicted first, followed by figures) - reduced to 85 mm with no color, formatted in either landscape or portrait with 2 per page, must be numbered, titled, and referenced in the paper

Reference Section

The references are ordered based on their occurrence in the paper.

Basic Format:
- Citation number (followed by a period)
- Author’s last name, first name (or initial), then middle initial
  - Use the same format for multiple authors of a single document
- Title of paper (in quotation marks)
- Title of publication or periodical (in italics)
- Name of publisher, city, and country of publication (if not in United States)
- Volume number (indicated by “V.”)
- Issue number (indicated by “No.”)
- Month (if given) and year of publication
- Inclusive page numbers (indicated by “pp.”)

Example:

Remember, an unpublished work should not be referenced.

Note that each piece of information in the citation is separated by a comma, the title of the referenced work is contained in quotation marks, the book or journal the article came from is typed in italics, the abbreviation for “page” is given as “pp”, and the entire reference ends with a period.

In-Text Citations

To cite a source in the text, use parenthetical citations. Place the number of the referenced document within parentheses at the end of the information, but before the period ending the sentence.

Example:
“...tensile strength of tendons (1).”