Documenting Sources: The IEEE Format

What is the IEEE format?

The Institute of Electrical and Electronics Engineers (IEEE) format is a set of conventions for documenting sources in written work. It is the standard documentation style in Engineering, but is also used in other fields. Other formatting styles, like Vancouver, are similar. This handout provides basic guidelines and examples.

What Sources Must Be Documented?

In academic writing, you must cite sources for all borrowed information and ideas, not only quoted material, but also ideas that you've put into your own words. Do not cite sources for common knowledge or generally known facts. If in doubt, cite your source.

Elements of Documentation

Complete IEEE documentation consists of two elements:

- **a bracketed reference citation** in the body of your paper at the end of each section of cited information, which begins with a [1] and continues indefinitely with [2], [3], and [4] and so on;
- **an entry on your 'References' page** at the end of your paper that gives complete publication information for all sources cited in your paper.

In-text Citations for Paraphrased Ideas and References to Research

Whenever you are quoting or paraphrasing information, you must include an in-text citation at the end of the borrowed section. IEEE allows you to insert your citation directly after the borrowed information in your sentence, rather than solely at the end of the sentence.

Use the same number! When you reference the same source, use the same number throughout the paper.

> **Example 1** As discussed by Smith et al. [4], the results demonstrate a correlation between speed and damage
>
> **Example 2** Scholars in the field argue over the reliability of this method of manufacturing. [2], [4]-[6], [12] support with the method, while [1], [5], [7-11] criticize it reliability.

Guidelines for paraphrased research

- IEEE recommends treating references like footnotes–appearing in line and inside punctuation marks. When including authors' names, it recommends using et al. when there are three over more authors, as in example 1.
- Numerical references (i.e., [2]) can be used instead of authors' names. Similarly, ranges (i.e., [4]-[6]) can be used to included several sources.

> **Example 3** The results included a "5% increase in temperature over the control group" [5, p.55].
>
> **Example 4** Various models for determining the maximum operating pressure in pipelines have been proposed [8, Fig. 3; 7 p. 26].

Guidelines for quotations and reference to specific parts of documents

- When citing a source directly with quotation marks, make sure you "include the page number as well" [4, p. 1]. The source number, 4, and the page number, p. 1, must be separated by a comma.
- You are also allowed to refer to the page number in the sentence itself, in which case you wouldn't need to include it in the citation.
- When citing multiple sources in a single sentence, use semi-colons to separate each item [6, p. 25; 7, p. 26]. The only exception to this rule is when page numbers are involved. If you directly quote a source twice and use two different page numbers, then the page number will need to change in your in-text citation.

Formatting an IEEE Reference List

Format: Do not list the authors in alphabetical order. List them in order of their citation number, starting with [1]. Do not combine references either; each reference should have its own number. The reference numbers should be in a separate column, flush left and in square brackets.

Authors' Names: Start with the first initials of the author followed by the last names (i.e., A. B. Smith). When there are three or more authors, start with the first author followed by et al.

Year: Include the month, day, year (i.e., Nov. 15, 1987) for reports and patents. Include the month and year for journal articles where possible. Include the year for books.

Titles: The IEEE style prefers abbreviations for titles. If the title has a common abbreviation, use that instead of the full title. If there is no common abbreviation, use the full title. Typically, the titles of books and journals feature capitalization of all major words. Titles of chapters and journal articles are placed in quotation marks and only the title's first word and proper nouns are capitalized.

Medium Designator: For online sources, specify the [Type of medium] after the title, as well as the document's location.

Books (Online and Print)

[1] J. Zobel. (2004). Writing *for computer science* [Online] 2nd ed. London, U.K.: Springer. Available: http://www.writing.com

[2] L. T. Brunton, et al. "The design of high quality two-dimensional recursive filters for seismic signal processing," in *Adv. in Geophysical Data Processing*, vol. 2. Greenwich, CT: JAI Press, 1985, pp. 223-261.

[3] M. Abramozwitz and I. A. Stegun, Eds., *Handbook of Mathematical Functions*. Washington, DC: NBS, 1964.

[4] G. O. Young, "Synthetic structure of industrial plastics," in *Plastics*, J. Peters Ed. New York: McGraw-Hill, 1984, pp. 15-64.

[5] Z. A. Shaw. (2011). *Learn Python the hard way* [Online]. Available: http://learnpythonthehardway.org/book/

Guidelines:
- **Authors and Editors:** Start with the author's first initials followed by last name. With two authors, use "and" to connect them (see [3]). If three or more authors are included, use et al. (see [2]). If referring to an edited book, followed the editors' names with Ed(s) as in [3].
- **Year:** For online resources, the year follows the author. For Print sources, the year comes at the end of the citation.
- **Name of the Part of the Book:** When citing a section of an edited book, include the chapter title in quotation marks (see [4]). For online sources, don't use quotation marks.
- **Title of Book:** For print books, capitalize important words in the book titles and subtitles. The title should be in italics. For online books, the title is mainly lower case and also in italics.
- **Type of Medium:** After the title of the book, [Online] is inserted to indicate that the resource was accessed online (see [1]).
- **Place of Publication:** For print books, include the place of publication and country (if not USA) or state abbreviation.
- **Publisher:** Insert the name of the publisher.
- **Page Numbers:** For chapters in edited books or to reference a particular section of the book, include the page numbers (i.e., pp. 15-88).
- **Web Address:** Include a web address where the book can be located (see [5])

Journal Articles (Online)

[6] J.S. Preiser et al. (2014, Mar.). Accuracy and limitation of continuous glucose monitoring using spectroscopy in critically ill patients. *Ann. Intensive Care* [Online]. *4(8)*, 6-9. Available: http://www.annalsofintensivecare.com/content/4/1/8

[7] S. Q. Jiang et al. (2007, Sept.). Creation of design on nylon metallic fabric. *J. Textile Inst.* [Online]. *98(3)*, 269-274. Available: http://www.texi.org/publicationsjti.asp

Guidelines:

- **Date of Publication:** The date should be presented in the following format: YYYY, MMM DD. Abbreviate names of months to three letters (i.e., Jan, Aug). There should be a period after the month abbreviation. For online sources, the date follows the authors (see [6]).

- **Article Title:** Enter the title as it is found on the article, capitalizing only the first word or any proper nouns/abbreviations. Separate the title from the subtitle using a colon. End the article title with a period, unless the title already ends with a question mark or an exclamation mark. For online sources, no quotation marks are used (see [7]).

- **Journal Title:** Abbreviate all significant words in the title, omitting conjunctions and prepositions, and capitalizing all remaining words. Put the title in italics.

- **Type of Medium:** After the journal title, [Online] is inserted to indicate that the resource was accessed online (see [7]).

- **Volume/Issue Number:** For online sources, omit all abbreviations such as vol., iss., or no. Insert the volume number first, using a hyphen to indicate multiple volumes if necessary (i.e., 5-6). Follow the volume number with the issue number in parentheses, also using a hyphen to indicate multiple issues if necessary (i.e., (2-3)). End issue information with a comma. For online sources, the volume and issue numbers should be in italics.

- **Page:** If page numbers are not available for a digital document, just omit.

- **URL:** Place the URL after the "Available:" (see [6]). The URL should be a publically available site; it should not include ezproxy.

Reports (Online)

[8] Canadian Food Inspection Agency. (2012, Mar.). National chemical residue monitoring program 2010-2012 [Online]. Available: http://www.inspection.gc.ca/food/chemical-residues-microbiology/chemical-residues/ncrmp-2010-2012-report/eng/1406727810600/1406727811741

[9] S. L. Talleen. (1996, Aug.). The IntraNet Architecture: Managing information in the new paradigm. Amdahl Corp., San Diego,CA. [Online]. Available: http://www.amdahl.com/doc/products/bsg/intra/infra/html

Guidelines:

- **Authors:** When the author is not available, use a corporation or government office instead.
- **Corporation:** When an author is listed, place the corporation or organization name after the title, followed by its location (see [9]).
- **Medium designator:** Place the medium designator before Available.

Patents (Online)

[10] Musical toothbrush with adjustable neck and mirror, by L.M.R. Brooks. (1992, May 19). *Pat. D 326 189* [Online]. Available: NEXIS Library/LEXPAT File/DESIGN

[11] Mode of protecting notes, check, &c., from alteration, by E. Watson. (1983, Aug. 3). *Specification of Letters Patent No. 871* [Online]. Available: uspto.gov

Guidelines:
- **Invention Name:** Start the entry with the name of the invention as listed on the patent.
- **Inventor Name:** After the invention's name, place a comma and the word "by" followed by the name of the inventor.
- **Date of Publication:** The date should be presented in the format: YYYY, MMM DD. Abbreviate names of months to three letters (i.e., Jan, Aug).
- **Patent number:** In italics, write down the patent number, followed by the medium designator.
- **URL:** End the entry with Available: followed by the URL or database.

Conference Proceedings & Papers Presented at Conferences (Online)

[12] T. Brincke and R. Nijsse. Challenging Glass 4 and COST action TU. presented at FIEMS 2014 [Online]. Available: http://www.fiems-conf.org/

[13] W. Whyte et al. A security credential management system for V2V communications, in *Con. Proc. VNC* 2013 [Online], Boston, MA, pp. 1-8. Available*:* ieesplore.ieee.org

Guidelines:
- **Presentation Title:** After the authors, write the title of the paper presented at the conference.
- **Conference name:** After the title, write the conference name starting with "presented at." You may use common abbreviations for conference titles.
- **Conference Proceedings:** After the paper title, write the abbreviation for the conference proceeding. Follow the title with the medium designator.
- **Other:** When possible included the location of the conference, the page numbers of the section and where the document is available.

Sample Reference Page:

References   `

[1] J. Zobel. (2004).*Writing for computer science* [Online] 2nd ed. London, U.K.:
     Springer. Available: http://www.writing.com

[2] L. T. Brunton, et al. "The design of high quality two-dimensional recursive filters
     for seismic signal processing," in *Adv. in Geophysical Data Processing*, vol. 2.
     Greenwich, CT: JAI Press, 1985, pp. 223-261.

[3] M. Abramozwitz and I. A. Stegun, Eds., *Handbook of Mathematical Functions*.
     Washington, DC: NBS, 1964.

[4] G. O. Young, "Synthetic structure of industrial plastics," in *Plastics*, J. Peters Ed.
     New York: McGraw-Hill, 1984, pp. 15-64.

[5] Z. A. Shaw. (2011). *Learn Python the hard way* [Online]. Available:
     http://learnpythonthehardway.org/book/

[6] J.S. Preiser et al. (2014, Mar.). Accuracy and limitation of continuous glucose
     monitoring using spectroscopy in critically ill patients. *Ann. Intensive Care*
     [Online]. *4(8)*, 6-9. Available: http://www.annalsofintensivecare.com/content/4/1/8

[7] S. Q. Jiang et al. (2007, Sept.). Creation of design on nylon metallic fabric. *J.
     Textile Inst.* [Online]. *98(3)*, 269-274. Available:
     http://www.texi.org/publicationsjti.asp

[8] Canadian Food Inspection Agency. (2012, Mar.). National chemical residue
     monitoring program 2010-2012 [Online]. Available:
     http://www.inspection.gc.ca/food/chemical-residues-microbiology/chemical-
     residues/ncrmp-2010-2012-report/eng/1406727810600/1406727811741

[9] S. L. Talleen. (1996, Aug.). The IntraNet Architecture: Managing information in
     the new paradigm. Amdahl Corp., San Diego,CA. [Online]. Available:
     http://www.amdahl.com/doc/products/bsg/intra/infra/html

[10] Musical toothbrush with adjustable neck and mirror, by L.M.R. Brooks. (1992,
     May 19). *Pat. D 326 189* [Online]. Available: NEXIS Library/LEXPAT
     File/DESIGN

[11] Mode of protecting notes, check, &c., from alteration, by E. Watson. (1983, Aug.
     3). *Specification of Letters Patent No. 871* [Online]. Available: uspto.gov