

IEEE: Overview

The Institute of Electrical and Electronics Engineers (IEEE) format is a set of conventions for documenting sources in written work. It is the standard style of documentation in Engineering, but it is also used in other fields. This handout provides basic guidelines and examples. For more information about IEEE format, see the IEEE Editorial Style Manual (2014).

Documentation

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 Do not cite sources for common knowledge or generally known facts.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.

Complete IEEE documentation consists of two elements:

1. 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;
2. An **entry in your 'References' page** at the end of your paper that gives complete publication information for all sources cited in your paper.

In-Text Citations

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

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

Guidelines for Quotations and References 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.

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

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 six 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.

Sample IEEE Reference List Entries

Books (Online)

[First Initial. Last name, *Title of book*, Edition. City of publication, State, Country
of publication: Publisher, Year. [Online]. Available: URL]

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

[2] Z. A. Shaw, *Learn Python the hard way*. 3rd ed. Boston, MA, USA: Addison-Weasley, 2014. [Online]. Available: <http://learnpythonthehardway.org/book/>

Books (Print)

- [First Initial(s). Last name. "Title of section/chapter," in *Title of Book*, Edition, Editors. City of Publication, (only U.S. State), Country of Publication: Publisher, Year, Pages.]
- [3] M. J. Kochenderfer et al., "State uncertainty," in *Decision Making Under Uncertainty: Theory and Application*, 1st ed., Cambridge, MA, USA: MIT Press, 2015, pp. 133 – 157.
- [4] M. Abramowitz and I. A. Stegun, Eds., *Handbook of Mathematical Functions*. Washington, DC, USA: NBS, 1964.
- [5] G. O. Young, "Synthetic structure of industrial plastics," in *Plastics*, J. Peters Ed. New York: McGraw-Hill, 1984.

Note on Authors and Editors: With two authors, use "and" to connect them (see [4]). If six or more authors are included, use et al. If referring to an edited book, followed the editors' names with Ed(s) as in [3].

Journal Articles (Online)

- [First Initial(s) Last name, "Title of article," Title of Journal, Vol. #, Issue no. #, Pages. Month, Year of Publication. Accessed on: Mon. Date, Year. doi: #, [Online]. Available: URL]
- [6] J.S. Preiser et al., "Accuracy and limitation of continuous glucose monitoring using spectroscopy in critically ill patients," *Ann. Intensive Care*, vol. 4, no. 8, pp. 6-9, Mar. 2014. Accessed on: Feb. 1, 2018. doi: 10.1186/2110-5820-4-8, [Online]. Available: <http://www.annalsofintensivecare.com/content/4/1/8>
- [7] S. Q. Jiang et al., "Creation of design on nylon metallic fabric," *J. Textile Inst.*, vol. 98, no.3, pp. 227-274, Sept. 2007. Accessed on: Feb. 1, 2018. doi: 10.1186/2110-5820-4-8, [Online]. Available: <http://www.texti.org/publicationsjti.asp>

Notes:

- 269– **Print Articles:** Follow the same format. Omit the medium designator [Online], doi number and the URL.
- 270– **Volume/Issue Number:** Use a hyphen to indicate multiple volumes and/or issues if necessary (i.e., 5-6).
- 271– **Page Numbers:** If page numbers are not available for a digital document, omit.

Reports (Online)

- [First Initial(s). Last name, "Title of report," Corporation Name, City, State, Country, Report #, Year. [Online]. Available: URL]
- [8] Canadian Food Inspection Agency, "National chemical residue monitoring program 2010-2012" Mar, 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, "The IntraNet Architecture: Managing information in the new paradigm" Amdahl Corp., San Diego, CA. Aug. 1996. [Online]. Available: <http://www.amdahl.com/doc/products/bsg/intra/infra/html>

Note: Follow the same format. Omit the medium designator [Online] and the URL.

Patents (Online)

[Name of invention, by Inventor Name. (Year, Month Day of publication). *Patent Number* [Online]. Available: URL/Database]

[10] Musical toothbrush with adjustable neck and mirror, by L.M.R. Brooks. (1992, May 19). *Patent 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

Patents (Print)

[First Initial(s). Last name, "Title of patent," U.S. Patent #, Month, day, year.]

[12] J. A. Smith, "Evolutionary plastic carpals," U.S. Patent 5 69008 125, Feb. 26, 2000.

Conference Proceedings (Online)

[First Initial(s). Last Name, Title of paper, in Conference name, Location (optional), Year, Pages. [Online]. Available: URL]

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

Presented Conference Papers (Online)

[First Initial(s) Last Name, Title of paper. presented at Conference. [Online]. Available: URL]

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

Note: Enclose the title of the proceeding or paper in double quotation marks. Replace the period that comes after the title with a comma. For conference papers, include the city, state and year after the name of the conference.

Sample IEEE Reference List

References

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

[2] Z. A. Shaw, *Learn Python the hard way*. 3rd ed. Boston, MA, USA: Addison-Wesley, 2011 [Online]. Available: <http://learnpythonthehardway.org/book/>

[3] M. J. Kochenderfer et al., "State uncertainty," in *Decision Making Under Uncertainty: Theory and Application*, 1st ed., Cambridge, MA, USA: MIT Press, 2015, pp. 133 – 157.

[4] *Handbook of Mathematical Functions*, M. Abramowitz and I. A. Stegun, Eds., Courier Corporation, Washington, DC, pp. 111 - 222.

- [5] G. O. Young, "Synthetic structure of industrial plastics," in *Plastics*, J. Peters Ed. New York: McGraw-Hill, 1984, pp. 15-64.
- [6] J.S. Preiser et al., "Accuracy and limitation of continuous glucose monitoring using spectroscopy in critically ill patients," *Ann. Intensive Care*, vol. 4, no. 8, pp. 6-9, Mar. 2014. [Online]. Available: <http://www.annalsofintensivecare.com/content/4/1/8>
- [7] S. Q. Jiang et al., "Creation of design on nylon metallic fabric," *J. Textile Inst.*, vol. 98, no.3, pp. 269-274, Sept. 2007. [Online]. Available: <http://www.texti.org/publicationsjti.asp>
- [8] Canadian Food Inspection Agency, "National chemical residue monitoring program 2010-2012" Mar, 2012. [Online]. Accessed on: Feb 1, 2018. Available: <http://www.inspection.gc.ca/food/chemical-residues-microbiology/chemical-residues/ncrmp-2010-2012-report/eng/1406727810600/1406727811741>
- [9] S. L. Talleen, "The IntraNet Architecture: Managing information in the new paradigm" Amdahl Corp., San Diego, CA. Aug. 1996. [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). *Patent 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
- [12] J. A. Smith, "Evolutionary plastic carpals," U.S. Patent 5 69008 125, Feb. 26, 2000.
- [13] W. Whyte et al. A security credential management system for V2V communications. in *Con. Proc. VNC 2013* Boston, MA, 2013 [Online]. pp. 1-8. Available: ieesplora.ieee.org
- [14] T. Brincke and R. Nijssse. Challenging Glass 4 and COST action TU. presented at FIEMS 2014. [Online]. Available: <http://www.fiems-conf.org/>