

CITATION GUIDE – IEEE STYLE

January 2013

A. CITING WITHIN YOUR TEXT – AS YOU WRITE

A citation is a short code (within the body of the document) that identifies an idea or fact that the writer has borrowed from elsewhere. The list of references, or bibliography, provides a complete and detailed list (at the end of the document) of all the sources the writer used¹. Do not underline any part of a reference; use *italics* as indicated in the examples below. **Consider citations as equations or formulas in words – be precise.**

Why do you need to reference correctly?

In writing, it is important to gather ideas, theories, and facts about your assigned topic; your statements need to be backed up by evidence and statistics to support your premises. References are also important for the following reasons:

- References provide **evidence** of the reading you have done in preparing your paper;
- They provide **support** for your own arguments;
- References allow you to show how well you understand the concepts of your topic and your ability to **critically apply that understanding**;
- References allow you to **avoid plagiarism** by showing the statistics, opinions, ideas, quotations, or illustrations you have used in preparing your report;
- They allow readers to **trace back** any information on aspects of your topic.

IEEE in-text style characteristics ❶ Citing is done with the [#] format. Punctuation occurs after the notation. For example: *According to one technical writing expert, even though IEEE is the most difficult style to learn, it is still the most valuable style for aspiring engineers to pick up [2]. (The [2] in the IEEE citation example here refers to the actual citation number within a document.)* ❷ If there are 3 or more authors, you may use *et al.* (no comma before the *et*) after the name of the first author (**but** list ALL names in your bibliography). ❸ Equations are numbered consecutively from the beginning of the paper to the end in their own numerical sequence.

NOTE: Use the reference number right after its first use; do not put it after every sentence in a paragraph unless you introduce other material between the first reference within the paragraph and its end.

* **Preferably**, with multiple citations supporting one statement, each citation is in its own brackets, e.g. [1], [3], [5] or [1] – [5]. However, [1, 5, 6] or [1-5] is also acceptable.

B. REFERENCE LIST – AT THE END OF THE PAPER

At the end of your paper, list your references **in the order you cited them** in the paper (NOT in alphabetical order). The references should provide enough information for your readers to find the original source. Below are the formats and examples for common types of sources.

If no date is available, use n.d. (This abbreviation means “no date” - use the abbreviation).

Be consistent with any abbreviations, e.g. journal titles, date format. IEEE uses specific journal abbreviations; for these, as well as general style information, see http://www.ieee.org/portal/cms_docs_iportals/iportals/publications/authors/transjnl/stylemanual.pdf

IMPORTANT – READ THIS! Characteristics of IEEE style:

- ❶ the square bracketed reference numbers are set **flush left** and **form a column of their own**, hanging out beyond the body of the reference;
- ❷ every (important) word in the title of a **book, journal or conference** must be capitalized;
- ❸ capitalize only the first word of the title of an **article, paper, thesis or book chapter**;
- ❹ capitalize the “V” in **volume** for a **book title**, but **not** for a periodical;

¹ Adapted from: University of Toronto Engineering Communication Centre. (2002, Aug. 19). “*IEEE Style Documentation* [Online]. Available: <http://www.ecf.utoronto.ca/~writing/handbook-docum1b.html> [May 2, 2009].

- ⑤ **abbreviations:** either spell out the entire name of each periodical or use accepted abbreviations; either spell out such words as *December*, etc. or use abbreviations, but be consistent within your references;
- ⑥ to indicate a page range, use **pp.** but only **p.** for one page;
- ⑦ **Name all authors and use only initials for first names;** use the entire word “**and**” before the last name of multiple authors;
- ⑧ references are arranged by the order of citation, not by alphabetical order;
- ⑨ **Double space** both within and between entries (not shown here – to save space).

NOTE 1: Each appendix has its own reference list. - **NOTE 2:** See page 5 for citing URLs

Dates: the examples for the dates of electronic source examples given below are “**year, month day**” but often only the year is available, so use what is available. Indent the first word of your annotations as well.

Available note: As a convenience, for electronic sources, you may cite the “available” links as the names of the e-journal aggregator or e-book sources provided by UMLibraries such as IEL, ENGnetBASE, ScienceDirect, etc., instead of giving the full url.

Anonymous Book	Paper	[Citation #] If there are no authors, corporate author, editor, compiler or translator, omit the author spot. Begin with <i>Title of the Book</i> , edition (if available). Place: Publisher, date.
		[1] <i>Moody's Municipal & Government Manual</i> . New York, NY : Moody's Investors Service, 1999.
	Online	[Citation #] If there are no authors, corporate author, editor, compiler or translator, omit the author spot. Begin with <i>Title of the Book</i> , xth ed. (year, month day) (Type of medium). Available: site/path/file [access date].
		[1] <i>Maximum Security</i> , 4 th ed. (2003) (Online). Available: netLibrary [Aug. 25, 2008].
Book with one author <i>[if an edited book, insert Ed. or Eds. after the comma after the editor's or editors' name; see the edited (paper) book example here]</i>	Paper	[Citation #] Author's Name, <i>Title of Book</i> , xth ed. (if given). Location: Publisher, year.
		[1] W.-K. Chen, <i>Linear Networks and Systems</i> . Belmont, CA: Wadsworth, 1993. [2] L. Schiebinger, Ed., <i>Gendered Innovations in Science and Engineering</i> . Stanford, CA: Stanford University Press, 2008.
	Online	[Citation #] Author's Name. (year, month day). <i>Title of Book</i> (edition) [Type of medium]. Available: site/path/file [access date].
		[1] S. C. Skalak. (2002). <i>Implementing Concurrent Engineering in Small Companies</i> [Online]. Available: http://www.engnetbase.com/books/1475/dke344_fm.pdf [May 2, 2008].
Book with two or more authors	Paper	[Citation #] For each author, use initials followed by surname. List the authors in the order given in the source. Note: commas go between each name, and before the “and” <i>when there are more than two names</i> . Name all authors . Location: Publisher, year.
		[1] J. H. Watt and S. A. van der Berg, <i>Research Methods for Communication Science</i> . Boston, MA: Allyn and Bacon, 1995.
	Online	[Citation #] Author(s). (year, month day). <i>Book Title</i> , edition [Type of medium]. Available: site/path/file [access date].
		[1] B. E. Larock, R. W. Jeppson, and G. Z. Watters. (2000). <i>Hydraulics of Pipeline Systems</i> [Online]. Available: http://www.engnetbase.com/books/508/1806_pdf_toc.pdf [Sept. 6, 2008].
Book Chapters, Dictionaries, Or Encyclopedia Articles	Paper	[Citation #] Author(s), “Chapter title,” in <i>Book Title</i> , xth ed. Editor(s) name(s), Ed(s). Location: Publisher, year, volume or chapter no. (if avail.), pp.
		[1] A. O'Keefe, “Teaching technical writing,” in <i>Research in Technical Communication: A Bibliographic Sourcebook</i> , M. G. Moran and D. Journet, Eds. Westport CT: Greenwood Press, 1985, pp. 85 -113.
	Online	[Citation #] Author(s). (year). “Chapter title,” in <i>Book Title</i> , xth ed. [Type of medium]. Editor(s) name(s), Ed(s). Location: Publisher, month day, volume or chapter no. (if available), pp. Available: site/path/file [access date].
		[1] D. Hart and A. Bauen. (2002). “Fuel cell fuel cycles,” in <i>Fuel Cell Technology Handbook</i> [Online], G. Hoogers, Ed. Boca Raton, FL: CRC Press. Available: ENGnetBASE [Sept. 22, 2008].
	Wikipedia etc.	[1] “Composite material,” in <i>Wikipedia, the Free Encyclopedia</i> [Online], May 13, 2008. Available: http://en.wikipedia.org/w/index.php?title=Composite_material&oldid=67545616 [May 24, 2008].

Articles from Journals, Magazines, Newspapers, (any regularly published items)	Document Delivery (i.e. paper copy)	[Citation #] Author(s), "Article title," <i>Journal Title</i> , vol. no., issue no., pp., month, year. NOTE: If there are no authors, omit the author spot and begin with article title, then the date, then the journal title (in italics).
		[1] D. A. Eberly, "LEED EB case study: Achieving platinum and the Energy Star label for corporate headquarters," <i>Energy Engineering</i> , vol. 105 no. 3, pp.23-37, 2008. [Note: "Energy Star" is the name of a government program & is in capitals].
	Online	[Citation #] Author(s). (year, month). "Article title," <i>Journal Title</i> [Type of medium], vol. (issue), pp. (if given). Available: site/path/file [access date].
		[1] A. G. Hannam, I. Stavness, J. E. Lloyd, and S. Fels. (2008). "A dynamic model of jaw and hyoid biomechanics during chewing," <i>Journal of Biomechanics</i> [Online], vol. 41 (5), pp. 1069-1076. Available: ScienceDirect [May 9, 2008].
Conference Proceedings	Document Delivery (i.e. paper copy)	[Citation #] Author(s), "Title of paper," in <i>Conference Proceedings</i> , City of Conference, Abbrev. State (if given), year, vol., pp.
		[1] Y. N. Rabotnov, "Creep rupture," in <i>Applied Mechanics: Proceedings of the Twelfth International Congress of Applied Mechanics</i> , Stanford, CA, 1968, pp. 342-349.
	Online	[Citation #] Author(s). (year, month). "Title of paper," in <i>Conference Proceedings</i> [Type of medium], City of Conference, year, vol., pp. Available: site/path/file [access date].
		[1] J. Garcia-Alfaro, M. Barbeau, and E. Kranakis. (2008, Apr.). "Security threats on EPC based RFID systems," in <i>Fifth International Conference on Information Technology: New Generations</i> [Online], Las Vegas, NV, 2008, pp. 1242 – 1244. Available: IEL [May 9, 2008].
Theses (M.S.) or Dissertations (Ph.D.)	Paper	[Citation #] Author, "Thesis/dissertation title," M.S. thesis OR Ph.D. dissertation, Abbrev. Department, Abbrev. University, City, Province, year.
		[1] S. Barua, "Fast Fourier transform for option pricing: Improved mathematical modeling and design of an efficient parallel algorithm," M. S. thesis, Dept. Comp. Sci., Manitoba, Winnipeg, MB, 2004.
	Online	[Citation #] Author, "Thesis/dissertation title" [Type of medium], M.S. Thesis OR Ph.D. dissertation, Abbrev. Department, Abbrev. University, City, Province, year. Available: site/path/file [access date].
		[1] C. Tuakta, "Use of fiber reinforced polymer composite in bridge structures" [Online], M. Eng thesis, Civil Env't. Eng., MIT, Cambridge, MA, 2005. Available: http://dspace.mit.edu/bitstream/1721.1/31126/1/61165353.pdf [May 2, 2008].
Patents (P) or Standards (S)	Paper	P. [Citation #] Inventor(s), "Title of patent," Abbrev. Country Patent x xxx xxx, Abbrev. month day, year (filing date).
		S. [Citation #] <i>Title of Standard</i> , Standard Number, date.
	Online	[1] B. Ryland Wiggs, Jack L. Womack, William C. Bickford, and John E. Hawk, "Geothermal heat exchange unit," U.S. Patent 5 816 314, Oct. 6, 1998.
		[2] <i>IEEE Criteria for Class IE Electrical Systems</i> , IEEE Standard 308, 1969.
Data Sheets	Paper	P. [Citation #] Name of the invention, by Inventor's Name. (year, month day). Patent Number [Type of medium]. Available: site/path/file [access date].
		S. [Citation #] Title of Standard [Type of medium]. Standard Number, date. Available: site/path/file [access date].
	Online	[1] Musical toothbrush with adjustable neck and mirror, by L. M. R. Brooks. (1992, May 19). Patent D 326 189 [Online]. Available: http://www.google.com/patents?id=wEgqAAAAEBAJ&dq=Patent+D326189 [May 15, 2008].
		[2] IEEE Guide for Safety in AC Substation Grounding [Online]. IEEE Standard 80-2000. Available: IEL [May 22, 2008].
Data Sheets	Paper	[Citation #] Company Name, "Title of Data Sheet," edition. Location: Publisher, year.
		[1] Motorola, "ALPU-CMM3 Motorola Canopy Surge Protection." Schaumburg, IL: Motorola, n.d.
	Online	[Citation #] Company Name. (year, month day). "Product Part Name" [Type of medium]. Available: site/path/file [access date].
		[1] National Semiconductor. (2000, Aug.). "LM741 Operational Amplifier" [Online]. Available: http://www.national.com/ds/LM/LM741.pdf [May 12, 2008].

Technical Reports (usually by a company, university or gov't agency. i.e. a non-commercial publisher often with a report number & in pdf format)	Paper	[Citation #] Author's Name(s) or Issuing Agency's Name, <i>Title of Report</i> , Abbrev. Company Name/Government Dept. City of Company, Abbrev. State, Technical Report number, year. [NOTE: most technical reports have personal authors, but some have company, government, or agency authors]. [1] U.S. Navy, <i>Department of the Navy Environmental Restoration Program Manual</i> , U.S. Navy, Washington, DC, Report Number 1200, 2006.
	Online (see also Web Pages below)	[Citation #] Author(s) name(s). (year, month). <i>Title of Report</i> . Company. City, State or Country. [type of medium]. Available: site/path/file [access date]. [1] A. Hashemi and K. M. Mosalam. (2007, July). <i>Seismic Evaluation of Reinforced Concrete Buildings Including Effects of Masonry Infill Walls</i> . Pacific Earthquake Engineering Research Center, College of Engineering, University of California, Berkeley, CA [Online]. Available: http://peer.berkeley.edu/publications/peer_reports/reports_2007/webR_PEER7100_HASHEMI_mosalam.pdf [May 12, 2008].
	Personal Messages & E-mail	Often used for interviews, these are not usually referenced as they are not available to the reader. Authors who insist on attributing material obtained through personal communication should identify the source of the information in the main text (e.g. Dr. Shafai stated during a class...). If cited in the references , use the following: [Citation #] Author (private communication), month day, year. [1] C. Shafai (private communication), Sept. 12, 2008. [Citation #] Author. (year, month day). "Subject line of posting." Personal e-mail. [1] C. Shafai. (2006, Jan. 21). "RE: Progress report." Personal e-mail.
Class Notes		[1] "Title of class notes," class notes for Course Number, Department, University, Term, year. [1] "Maxwell's equations and time-varying electromagnetic fields," class notes for ECE 3590, Department of Electrical and Computer Engineering, University of Manitoba, 2006.
Web Pages (Note: a government or a company can be an author)		[Citation #] Author(s) (if available. If no author, start with title & move date after the title). (year, month day). <i>Title of Web Site</i> [Type of medium]. Available: site/path/file [access date]. [1] Environment Canada. (2006, Oct. 19). <i>Canadian Wind Energy Atlas</i> [Online]. Available: http://www.windatlas.ca/en/index.php [May 28, 2008].
Blog/ Twitter		[Citation #] Author(s). (year, month day). "Title of individual blog entry" [Weblog entry]. <i>Name of Weblog</i> . Sponsoring organization (if any). Available: site/path/file to permalink.) [access date]. (Use this pattern for Tweets as well). [1] S. Abram. (2008, Apr. 22). "Australian innovation" [Weblog entry]. <i>Stephen's Lighthouse</i> . Available: http://stephenslighthouse.sirsidynix.com/archives/2008/04/australian_inno.html [May 22, 2008].
Podcast/ Movie/ YouTube		[Citation #] Author(s), Responsibility (if appropriate). " <i>Title: Subtitle</i> " [Format]. Special credits (if appropriate). Place of publication: Publisher, Year. Available: site/path/file [access date]. [1] S. Gary, Presenter, "Black Hole Death Ray," <i>StarStuff</i> , Dec. 23, 2007 [Podcast radio program]. Sydney: ABC News Radio. Available: http://abc.net.au/newsradio/podcast/STARSTUFF.xml [May 6, 2008]. [1] "Dilbert Cartoon- Engineers," <i>YouTube</i> . n.d. [Online] Available: http://www.youtube.com/watch?v=qOtoujYOWw0 [August 12, 2009].
Software		[Citation #] Author(s) or company name (if available). <i>Software Title</i> [Type of medium]. Place: Publisher, year. (If online, add URL after the year and add the access date). [1] Thomson ISI. <i>Endnote 7</i> [CD-ROM]. Berkeley, CA: ISI ResearchSoft, 2003.
Computer Game		[Citation #] <i>Computer Game Title</i> [Type of medium]. Place: Publisher, year. (If online, add URL after the year and add the access date). [1] <i>The Hobbit: The Prelude to the Lord of the Rings</i> [CD-ROM]. United Kingdom: Vivendi Universal Games, 2003.
Video Recording		[Citation #] Writer/ composer (if known), Responsibility, <i>Title of Work</i> [Type of medium]. Place: Publisher, year. [1] C. Rogers, Writer and Director, <i>Grrls in IT</i> [Videorecording]. Bendigo, Vic.: Video Education Australasia, 1999.

For unpublished materials, chose one of the following:

Unpublished materials	[Citation #] Author(s)/person(s), private communication, month, year.
	[Citation #] Author(s)/person(s), "Title of paper," unpublished.

Hyperlink references: Remove hyperlinks. If a URL runs over one line, follow these guidelines:²

1. break only after a forward slash or a "dot" (period)
2. do not split the double slash
3. do not introduce hyphens to break words (be very careful about this as Word may try to hyphenate automatically)
4. separating the extension (e.g. the .html at the end) is discouraged.

Citing Tables and Graphics

Within the text:

Tables

For tables, the title is *centred*, in CAPITAL LETTERS *on top* and the source is indicated by a square bracket [] with the reference number placed inside the brackets as illustrated below. The numbering for table titles is in **Roman** numerals. If it is your own table with information extrapolated from multiple sources, you must cite each source within the table. If it is your own table, obviously there are no references. **Within the text (& first words & letters)**, only capitalize the "T" as in: "Table I..."

TABLE I
GAS PRICES PER LITRE [1]

	Winnipeg [2]	Vancouver [3]
May/09	1.77	1.98
June/09	1.84	2.11
July/09	1.81	2.03
August/09	1.96	2.17

Graphics

For graphics, the title is *centred*, in *lower case* letters *beneath* the graphic and the source is indicated by a square bracket [] with the reference number placed inside the brackets as illustrated below. **In text**, use the abbreviation "Fig." followed by the figure number. Numbering for graphics is in **Arabic** numerals and is in numerical order along with text references.



Figure 3. Gas pump [2].

For figures with multiple images, see below:

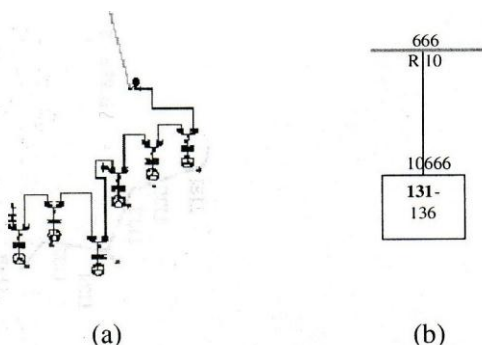


Figure 2 a) single series daisy-chain physical diagram
b) equivalent representation of circuit (a)

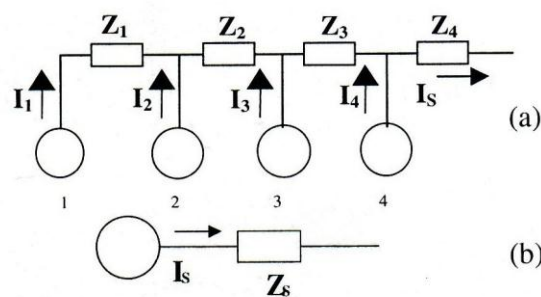


Figure 3 a) single series daisy-chain
b) equivalent representation of circuit (a)

In the bibliography/reference list:

² IEEE Computer Society. (2010). "IEEE Computer Society Style Guide – References" [Online]. Available: http://www.computer.org/portal/web/publications/style_refs [Sept. 3, 2010].

Table or Graphic	Paper	Cite graphics using the convention for the type of material you are using for the graphic, e.g. book, journal, conference, encyclopedia, etc. The page number of the illustration will be in the <i>in-text reference</i> . It would be an image from a chapter in that case.
		[1] B. Gustavii. <i>How to Write and Illustrate a Scientific Paper</i> . New York: Cambridge University Press, 2008.
	Online	Cite graphics using the convention for the type of material you are using as though the image was a "chapter." Be sure to add the actual name of the graphic as the "chapter" (do a right click to get that name to save it to your computer). NOTE: if the illustration source is in pdf format, just use the normal citation method for the source type (book, article, etc.). If you have also used the source for information, it will have the same citation number at the end of your paper as the illustration.
		[1] J. Glower. (2005, May 17). "image012.jpg," in <i>RFID Cattle Tags</i> [Online]. Available: http://www.ece.ndsu.nodak.edu/~glower/RFID/May2005.htm [May 4, 2008].
	Self-citations	[Citation #] Your Name(s). "Image name/title." Winnipeg: Design Eng., Univ Manitoba, Winnipeg, MB, date.

The IEEE format above is derived from IEEE Editorial Style Manual (*PDF version*)

http://www.ieee.org/portal/cms_docs_iportals/iportals/publications/authors/transjnl/stylemanual.pdf

If you have ANY questions about citing materials, please ask in the Engineering Library or e-mail ngodava@cc.umanitoba.ca

Common mistakes:

1. Citations are in **numerical order** within the paper. Reference numbers form a **separate column** of their own.
2. Each reference number can be **used more than once** in a paper.
3. Reference numbers are used only within the text, not in the Table of Content's list of illustrations and tables –there's no context there. ONLY capitalize TABLE in a header; otherwise only capitalize the T"
4. References to **graphics** are included in the numerical order, not separate.
5. **Each appendix has its own bibliography.**
6. Keep date formats **consistent** – abbreviate all or none.

Read the *Characteristics of IEEE style* on pages 1-2 for more information – or just ask!

NOTE: the image below is not in IEEE style, but will give you an idea of the **elements of a citation**.

ARTICLE IN A JOURNAL <i>* journal titles are often abbreviated</i>	<p>author(s) date article title</p> <p>Polis, G.A. 1981. The evolution and dynamics of intraspecific predation. <i>Annu. Rev. Ecol. Syst.</i> 12: 225-251.</p> <p>journal title* journal issue page no.(s)</p>
BOOK	<p>author(s) date book title publisher info.</p> <p>Hermann, H.R. 1982. <i>Social Insects</i>. Academic Press, London.</p>
CHAPTER / ARTICLE IN A BOOK <i>(hint: look for the word "In")</i>	<p>article author(s) date article/chapter title</p> <p>Buskirk, J. W. & Uetz, G.W. 1982. Sociality in the Arachnida. <i>In: Social Insects</i> (H.R. Hermann, ed.), pp. 281-367. Academic Press, London.</p> <p>book title book author(s) page no.(s) publisher info.</p>