

IEEE General Citation Guide

General Rules

<ul style="list-style-type: none"> • IEEE in-text citations consist of numbers provided in square brackets, which correspond to the appropriate sources in the reference list at the end of the paper. Each in-text citation number should appear on the text line, inside sentence punctuation, with a space before the bracket. • The in-text citation numbers start at [1] and continue in ascending order throughout the paper. 	<ul style="list-style-type: none"> • A numbered list of references must be provided at the end of the paper. The reference list contains full details of all sources cited in-text. The sources are numbered in the order they are used in the paper. The given name of the author is abbreviated to the initials followed by the last name. • In the reference list, write the names of all authors, up to six. If there are more than six author names, use the primary author's last name followed by "et al." (meaning "and others").
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	In-Text Citations	Parenthetical Citations	In-text and Parenthetical Citations: Overarching Rules
General	Johnson [1] believed that...	Paper is made from trees [1].	<u>Direct Quotes</u> : The page number(s) must be included. <u>Paraphrasing</u> : Page numbers are not generally used unless a specific theory or idea is being discussed. <u>Multiple Sources</u> : Each source gets its own brackets. All citations must be written out. <u>Bracketed sources</u> : Can be used as nouns in the sentence or can be treated as if they are footnote numbers. <u>Three or more authors</u> : When citing three or more authors in an in-text citation, list the first author and et al. (e.g., Holland et al.)
Direct Quotes	Schumer [6, pp. 4-5] argued that... Holland et al. [7, p. 33] argued...	Schumer argued that "the importance of clear writing cannot be understated" [6, pp. 4-5].	
Figures or Images	The data in [2] shows...	Figure 1.3 shows the evidence [4].	
Multiple Sources	[1], [3], and [6] show...	Weebly, Ketting, and Goodman's ideas are still widely used today [1], [2], [3].	

Reference Citations

- References must start with reference numbers which are set flush left and form a column of their own, hanging out beyond the body of the reference. The reference numbers are on the line, enclosed in square brackets.
- While citing electronic information in a reference list, include the relevant URL. Below are a few examples that include the URL in a reference.
- All references must include a date that comprises at least the year of publication (or year of the accessed date if applicable).
- If no date is provided, use the abbreviation "(n.d.)" in the same position where the date would normally be displayed in the reference, preceded and followed by periods.
- All references, except those ending with URLs, will end with a period, including those with a DOI.
- If a reference contains both a DOI or accessed date, as well as a URL, the DOI or accessed date will be placed first, followed by a period, and then the URL.

Refer to the [IEEE reference guide](#) for additional formats.

Articles	J. K. Author, "Title of the article," <i>Title of the News Source</i> , Month Day, Year. [Online]. Available: http://www.url.com <ul style="list-style-type: none"> • A. Clark, "A new AI tool creates hyperrealistic photos. Can you tell the difference?," <i>CBS News</i>, Aug. 30, 2024. [Online]. Available: https://www.cbsnews.com/news/can-you-tell-real-image-from-ai-flux/
Books and Chapters	J. K. Author, "Title of chapter in the book," in <i>Title of Published Book</i> , xth ed. City of Publisher, (only U.S. State), Country: Abbrev. of Publisher, year, ch. x, sect. x, pp. xxx–xxx. <ul style="list-style-type: none"> • A. Histace, "Image restoration—Recent advances and applications," in <i>Super-Resolution Restoration and Image Reconstruction for Passive Millimeter Wave Imaging</i>. Rijeka, Croatia: InTech, 2012, pp. 25–45.
Conference Papers	J. K. Author, "Title of paper," presented at the Abbreviated Name of Conf., City of Conf., Abbrev. State, Country, Month and day(s), year, Paper number.

	<ul style="list-style-type: none"> • G. W. Juette and L. E. Zeffanella, “Radio noise currents on short sections on bundle conductors,” presented at the IEEE Summer Power Meeting, Dallas, TX, USA, Jun. 22–27, 1990, Paper 90 SM 690-0 PWRS.
Datasets	<p>Author, Date, Year. “Title of Dataset,” distributed by Publisher/Distributor, http://url.com (or if DOI is used, end with a period)</p> <ul style="list-style-type: none"> • S. Ansolabehere, M. Palmer, and A. Lee, January 20, 2014, “Precinct-Level Election Data. V1,” distributed by Harvard Election Data Archive, https://doi.org/10.7910/DVN/YN4TLR.
Lectures	<p>University name. (year). Title of lecture. [Type of Medium]. Available: URL</p> <ul style="list-style-type: none"> • Argosy University Online. (2012). Information literacy and communication: Module 2 filing and organization. [Online]. Available: http://www.myclassonline.com
Manual/Handbook	<p>J. K. Author (or Abbrev. Name of Co., City of Co. Abbrev. State, Country). <i>Name of Manual/Handbook</i>, x ed. (year). Accessed: Date. [Online]. Available: http://www.url.com</p> <ul style="list-style-type: none"> • L. Breimann. <i>Manual on Setting Up, Using, and Understanding Random Forests v4.0</i>. (2003). Accessed: Apr. 16, 2014. [Online]. Available: https://www.stat.berkeley.edu/~breiman/Using_random_forests_v4.0.pdf
Manual/Handbook (Online)	<p>J. K. Author (or Abbrev. Name of Co., City of Co. Abbrev. State, Country). <i>Name of Manual/Handbook</i>, xth ed. (year). Accessed: Month. Day, Year. [Online]. Available: http://www.url.com</p> <ul style="list-style-type: none"> • L. Breiman. <i>Manual on Setting Up, Using, and Understanding Random Forests</i>, 4th ed. (2003). Accessed: Apr. 16, 2014. [Online]. Available: https://www.stat.berkeley.edu/~breiman/Using_random_forests_v4.0.pdf
Online Books	<p>J. K. Author, “Title of chapter in the book,” in <i>Title of Published Book</i>, xth ed. City of Publisher, State, Country: Abbrev. of Publisher, year, ch. x, sect. x, pp. xxx–xxx. [Online]. Available: http://www.web.com</p> <ul style="list-style-type: none"> • G. O. Young, “Synthetic structure of industrial plastics,” in <i>Plastics, vol. 3, Polymers of Hexadromicon</i>, 2nd ed. New York, NY, USA: McGraw-Hill, 1964, pp. 15–64. [Online]. Available: https://www.scirp.org
Online Video (e.g., YouTube)	<p>Video Owner/Creator, Location (if available). <i>Title of Video: In Initial Caps</i>. (Release date). Accessed: Month. Day, Year. [Online Video]. Available: http://URL.onlinevideo.org</p> <ul style="list-style-type: none"> • Doane Academy, Burlington, NJ, USA. <i>Second Grade Bossy R</i>. (Feb. 28, 2013). Accessed: Jun. 3, 2018. [Online Video]. Available: https://www.youtube.com/watch?v=PUKHo1Y-BcM
Patent	<p>J. K. Author, “Title of patent,” U.S. Patent x xxx xxx, Abbrev. Month. day, year.</p> <ul style="list-style-type: none"> • J. P. Wilkinson, “Nonlinear resonant circuit devices,” U.S. Patent 3 624 125, Jul. 16, 1990. <p>J. K. Author, “Title of patent,” Country Patent xxx, Abbrev. Month. day, year.</p> <ul style="list-style-type: none"> • K. Klionovski, “Broadband dual-band microstrip antenna,” RU Patent Utility Model 167296, Dec. 27, 2016.
Periodicals	<p>J. K. Author, “Name of paper,” <i>Abbrev. Title of Periodical</i>, vol. x, no. x, pp. xxx-xxx, Abbrev. Month, year.</p> <ul style="list-style-type: none"> • M. Ito et al., “Can the application of amorphous oxide TFT be an electrophoretic display?,” <i>J. Non-Cryst. Solids</i>, vol. 354, no. 19, pp. 2777–2782, Feb. 2008. <p>J. K. Author, “Name of paper,” <i>Abbrev. Title of Periodical</i>, vol. x, no. x, pp. xxx-xxx, Abbrev. Month, year, doi: xxx.</p> <ul style="list-style-type: none"> • M. M. Chiampi and L. L. Zilberti, “Induction of electric field in human bodies moving near MRI: An efficient BEM computational procedure,” <i>IEEE Trans. Biomed. Eng.</i>, vol. 58, pp. 2787–2793, Oct. 2011, doi: 10.1109/TBME.2011.2158315.
Standards	<i>Title of Standard</i> , Standard number, Corporate author, location, date.

	<ul style="list-style-type: none"> • <i>Parameter Values for Ultra-High Definition Television Systems for Switzerland, Production and International Programme Exchange</i>, Rec. ITU-R BT.2020-2, International Telecommunications Union, Geneva, Switzerland, Oct. 2015.
Technical Reports	<p>J. K. Author, "Title of report," Abbrev. Name of Co., City of Co., Abbrev. State, Country, Rep. xxx, year.</p> <ul style="list-style-type: none"> • E. E. Reber, R. L. Michell, and C. J. Carter, "Oxygen absorption in the Earth's atmosphere," Aerospace Corp., Los Angeles, CA, USA, Tech. Rep. TR-0200 (4230-46)-3, Nov. 1988. <p>J. K. Author, "Title of report," Company, City, State, Country, Rep. no., (optional: vol./issue), Date. Accessed: Date. [Online]. Available: site/path/file</p> <ul style="list-style-type: none"> • R. J. Hijmans and J. van Etten, "Raster: Geographic analysis and modeling with raster data," R Package Version 2.0-12, Jan. 12, 2012. [Online]. Available: http://CRAN.R-project.org/package=raster
Theses and Dissertations	<p>J. K. Author, "Title of thesis," M.S. thesis, Abbrev. Dept., Abbrev. Univ., City of Univ., Abbrev. State, year.</p> <ul style="list-style-type: none"> • N. Kawasaki, "Parametric study of thermal and chemical nonequilibrium nozzle flow," M.S. thesis, Eng., Osaka Univ., Osaka, Japan, 1993. <p>J. K. Author, "Title of thesis," M.S. thesis, Abbrev. Dept., Abbrev. Univ., City of Univ., Abbrev. State, Country, year. [Online]. Available: http://www.url.com</p> <ul style="list-style-type: none"> • D. Schwartz, "Development of a computationally efficient full human body finite element model," M.S. thesis, Virginia Tech – Wake Forest Univ. School of Biomed. Eng. Sci., Winston-Salem, NC, USA, 2015. [Online]. Available: https://wakespace.lib.wfu.edu/bitstream/handle/10339/57119/Schwartz_wfu_0248M_10697.pdf
U.S. Government Documents	<p>Legislative body. Number of Congress, Session. (year, month, day). <i>Number of bill or resolution, Title</i>. [Type of medium]. Available: site/path/file</p> <ul style="list-style-type: none"> • U.S. House. 102nd Congress, 1st Session. (1991, Jan. 11). <i>H. Con. Res. 1, Sense of the Congress on Approval of Military Action</i>. [Online]. Available: LEXIS Library: GENFED File: BILLS
Unpublished	<p>J. K. Author, private communication, Abbrev. Month, year.</p> <ul style="list-style-type: none"> • Harrison, private communication, May, 1995. <p>J. K. Author, "Title of paper," unpublished.</p> <ul style="list-style-type: none"> • B. Smith, "An approach to graphs of linear forms," unpublished.
Websites	<p>First Name Initial(s) Last Name. "Page Title." Website Title. Date Accessed. [Online]. Available: Web Address.</p> <ul style="list-style-type: none"> • J. Smith. "Obama inaugurated as President." CNN.com. Accessed: Feb. 1, 2009. [Online.] Available: http://www.cnn.com/POLITICS/01/21/obama_inaugurated/index.html

Heading levels

I. PRIMARY HEADINGS: Are enumerated by Roman numerals, centered above text, and set in 10-pt. and 8-pt. caps.

A. Secondary headings: Are enumerated by capital letters followed by periods ("A.," "B.," etc.), flush left, italic, upper and lowercase.

1) Tertiary Headings: Are enumerated by Arabic numerals followed by parentheses. They are indented one em space, run into the text in their sections, italic, upper and lowercase, and followed by a colon.

1a) Quaternary headings: Are identical to tertiary headings, except that they are indented two em spaces instead of one em space, lowercase letters are used as labels, and only the first letter of the heading is capitalized.

Note: Reference and Acknowledgment headings are never enumerated and are also set in 10-pt. and 8-pt. caps.

Example:

REFERENCES
ACKNOWLEDGMENT (note spelling here)

Figures, Tables, and Equations

- All the citations of figures, tables, and equations in the article must follow a numerical order.
- Do not use articles (“a,” “an,” or “the”) at the beginning of a caption for figures, tables, or equations in in-text citations.
- e.g., Incorrect: Refer to the Fig. 1; Correct: Refer to Fig. 1.

Figures	Tables	Equations															
<ul style="list-style-type: none"> • The title of the figures must be descriptive and placed below the figure. • Each caption number should be cited with the abbreviation “Fig.” and the number, followed by a period, an em space, and then the text of the caption. <div style="text-align: center;"> <p>Fig. 1. Plot of temperature measurement vs. time</p> </div> <ul style="list-style-type: none"> • Use a lowercase letter within parentheses if parts of the figure are labeled. Include the description of those labels in the caption of the figure. Example: Fig. 1. Intercomplex crosstalk characteristics. (a) Electrode transmission. (b) Interelectrode crosstalk. • For in-text citations, use the abbreviation “Fig.” followed by the figure number. • If a figure is more than one page, the full descriptive part of the caption should be cited with the first part of the figure followed by the corresponding caption for the part. On the subsequent pages, the word (Continued.) will be placed under the carryover parts of the figure followed by a repeat of the full descriptive part of the caption and the corresponding caption for the carryover parts. Example: Fig. 6. True and estimated spectra for a real data sequence. (a) True spectrum. Fig. 6. (Continued.) True and estimated spectra for a real data sequence. (b) Estimated with the periodogram. 	<ul style="list-style-type: none"> • Captions for a table must be centered above the table with the label TABLE, and the enumeration must be represented in Roman numerals (e.g., TABLE I). • The description of the caption must be centered directly below the table number caption (e.g., Cars I Have Seen Today). • The optional descriptive notes can be included below the table, if necessary. <div style="text-align: center;"> <p>TABLE I</p> <p>Cars I Have Seen Today</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Make</th><th style="text-align: center;">Color</th><th style="text-align: center;">Location</th></tr> </thead> <tbody> <tr> <td style="text-align: center;">Toyota</td><td style="text-align: center;">Red</td><td style="text-align: center;">Grocery Store</td></tr> <tr> <td style="text-align: center;">Mercedes</td><td style="text-align: center;">Blue</td><td style="text-align: center;">Parking Garage</td></tr> <tr> <td style="text-align: center;">Hyundai</td><td style="text-align: center;">White</td><td style="text-align: center;">Parking Garage</td></tr> <tr> <td style="text-align: center;">Ford</td><td style="text-align: center;">White</td><td style="text-align: center;">Highway</td></tr> </tbody> </table> <p>White cars were the most common today.</p> </div> <ul style="list-style-type: none"> • Most charts, graphs, and tables are sized to be one column width (3.5 inches) or two columns width (7.16 inches). <ul style="list-style-type: none"> • Lines must be at least 0.5 or 1-point thick. • Use the same font type, font size, and label style across all graphics. (Recommended font size: 9-10 points.) <ul style="list-style-type: none"> • Use vector files and high-resolution images to improve the quality of your graphics. (>300dpi for color and grayscale graphics; >600dpi for black-and-white line art.) 	Make	Color	Location	Toyota	Red	Grocery Store	Mercedes	Blue	Parking Garage	Hyundai	White	Parking Garage	Ford	White	Highway	<ul style="list-style-type: none"> • Equations are center-aligned and labeled with right-aligned Arabic numbers enclosed in parentheses. <div style="text-align: right;"> $A = \pi r^2 \quad (1)$ </div> <ul style="list-style-type: none"> • For in-text citations, mention the equation number only, e.g., mention “as seen in (2)” instead of “as seen in Equation (2).” <ul style="list-style-type: none"> - Exception: A sentence beginning with an equation number, e.g., “Equation (1) demonstrates...”
Make	Color	Location															
Toyota	Red	Grocery Store															
Mercedes	Blue	Parking Garage															
Hyundai	White	Parking Garage															
Ford	White	Highway															

This guide is based on the 2025 edition of the IEEE reference guide. For more information, consult the IEEE reference guide available on [the IEEE website](https://www.ieee.org/authoring-style).