

Producing Correct Citations in IEEE Style using Biber & Bib_LAT_EX

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Abstract—This document shows how to utilise the Biber and the Bib_LAT_EX package with the IEEE citation style for different types of references. Included is both the pointer to the IEEE style guide and an example entry plus the output produced by that entry.

I. INTRODUCTION

CORRECTLY formatting citations is an imperative for academic writing. However for some types of references, especially online ones, finding the correct entry to add to Bib_LAT_EX is a challenge. The School has prepared this document to help with this problem. In the following examples, any fields shown in **bold** are required. The remainder are optional but should be included if the data is available. The full IEEE Style guide can be found at:

http://www.ieee.org/documents/style_manual.pdf.

When entering date information follow these conventions; *day* is entered in numeric form, *month* is entered as the full English word e.g. February, *year* is entered as the full four-digit year.

II. PRINT REFERENCES

This section explicitly deals with printed references such as books, magazines and newspapers. There are other types that you should use if the resource was found online (see Section III).

A. Books

Books are one of the simplest references to make, however you must have actually seen/read the book in question (if only to check it *does* support your argument). Do not use this type for reference manuals or technical standards, see Section II-F. Books can just be referenced within any argument [1] where the reference supports your point.

```
@book{cite-key,
  author = {Last Name, First and Author,
           Second and Author, Third},
  title = {Title of the book},
  publisher = {Publisher Name},
  edition = {Edition if there is more
            than one},
  address = {City and, Country of
            Publication},
```

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```
  year = {Year of Publication}
}
```

- [1] F. Last Name, S. Author, and T. Author, *Title of the Book*, Edition if there is more than one. City and Country of Publication: Publisher Name, Year of Publication.

Self-Published Books / Print On Demand

A relatively recent development in the publishing world is for the authors of a book to bypass the traditional publishing process and instead ‘self-publish’. These works do not have the same sort of vetting that a book with an editor etc. from the publisher has. This fact does not automatically disqualify the book as a resource, especially if others in your field/discipline also cite it. Self-published books are still cited in the same way as edited books, but care needs to be taken with the Publisher field.

How can I tell if the book I want to use is self-published? Who is the publisher?

Look at the imprint page, if there is no details of a publishing company then it may be self-published. Look specifically for the word ‘published’. If there is no publisher listed, take whoever is listed in the copyright line as the publisher. i.e. ‘Copyright © Cameron Gray, 2018. All rights reserved.’ would identify Cameron Gray as the copyright holder and self-publisher. You may find the name of a printing company on the imprint page. The printer is never the publisher or copyright holder, unless explicitly stated on the page.

B. Books of Collected Papers

Academic publishers will occasionally produce a ‘collected works’ book which contains a selection of papers that were submitted to their journals or conferences where they publish the works. It can be difficult when using online tools, such as Google Scholar or Web of Science, to identify these works correctly. However where a book has either a plethora of authors (> 5) or none, these are signs it may be collected works. You cannot cite the book and use the item for multiple papers. Each one needs to be cited [2] individually.

```
@inbook{cite-key,
  author = {Last Name, First and Author,
           Second},
  booktitle = {Title of the Book},
  title = {Title of the Paper},
  location = {City and Country of
            Publication},
  publisher = {Name of the Publisher},
```

```

series = {Name of the Series Book is in
},
year = {Year of Publication}
}

```

- [2] F. Last Name and S. Author, "Title of the paper," in *Title of the Book*, ser. Name of the Series Book is in. City and Country of Publication: Name of the Publisher, Year of Publication.

C. Conference Papers

Papers presented at conferences are handled differently from journal articles when preparing a Bibliography. They are still cited [3] in your text.

```

@inproceedings{cite-key,
author = {Last Name, First and Author,
Second and Author, Third},
eventtitle = {Name of the Conference},
location = {Where the Conference was
Held},
pages = {start -- end or if one page
start only},
title = {Title of the Paper},
url = {http://theurl.oftheconference.
com/paper.pdf},
year = {Year of Publication}
}

```

- [3] F. Last Name, S. Author, and T. Author, "Title of the paper," presented at the Name of the Conference, Where the Conference was Held, Year of Publication, start–end or if one page start only. [Online]. Available: <http://theurl.oftheconference.com/paper.pdf>.

D. Journal, Newspaper or Magazine Articles

When citing journal articles, less information is needed in the reference as the publication will have unique identifiers. Always cite the item [4]–[6] in the text.

```

@article{cite-key,
author = {Last Name, First and Author,
Second and Author, Third},
day = {Include Day of Publication for
Newspapers},
doi = {Digital Object Identifier},
journaltitle = {Title of the Journal},
issn = {International Standard Serial
Number},
pages = {start -- end or if one page
start only},
month = {Include Month of Publication
for Newspapers and Magazines},
number = {Number within the Volume},
title = {Title of the Article},
url = {http://urltothe.com/paper.pdf},
volume = {Volume Number},
year = {Year of Publication},
}

```

Example for Journal Articles;

- [4] F. Last Name, S. Author, and T. Author, "Title of the article," *Title of the Journal*, vol. Volume Number, no. Number within the Volume, start–end or if one page start only, Year of Publication, ISSN: International Standard Serial Number. DOI: DigitalObjectIdentifier. [Online]. Available: <http://url.of.thejournal.com/article.pdf>.

Example for Magazine Articles;

- [5] F. Last Name, S. Author, and T. Author, "Title of the article," *Title of the Journal*, vol. Volume Number, no. Number within the Volume, start–end or if one page start only, Jan. Year of Publication, ISSN: International Standard Serial Number. DOI: DigitalObjectIdentifier. [Online]. Available: <http://url.of.themag.com/article.pdf>.

Example for Newspaper Articles;

- [6] F. Last Name, S. Author, and T. Author, "Title of the article," *Title of the Journal*, vol. Volume Number, no. Number within the Volume, start–end or if one page start only, Jan. Year of Publication, ISSN: International Standard Serial Number. DOI: DigitalObjectIdentifier. [Online]. Available: <http://url.of.thepaper.com/article.pdf>.

E. Law, Statutes and Regulations

Unfortunately the style of the citation text changes depends on the country the law was written for. Included are examples of U.K., U.S. and E.U. law as these are the most frequent jurisdictions used at a U.K. University.

1) *U.K. Legislation, Primary and Secondary*: There is a specific format that must be adhered to. The 'author', 'location' and 'publisher' fields cannot be altered from the supplied values. The URL will always be in the same format - but the year and number tokens will need to be replaced with the actual values. UK Law has two identifying marks, the year the law received Royal Assent and a Number, which starts from 1 for each new year. The law must be cited as normal, however it is customary to state the Act Name in the text. For example; ... in Title of the Act [7] ...

```

@book{cite-key,
author = {H. M. Government},
location = {London},
note = {c. <number>},
publisher = {HMSO},
title = {Title of the Act},
url = {http://www.legislation.gov.uk/
ukpga/<Year>/<number>/contents},
year = {<Year>}
}

```

- [7] H. M. Government, *Title of the Act*. London: HMSO, Year, c. Number. [Online]. Available: <http://www.legislation.gov.uk/ukpga/Year/Number/contents>.

2) *U.S. Legislation - Acts of Congress*: Similar to the U.K. Law entry, referencing U.S. Law has a fixed style. In this case the ‘author’ must be paid particular attention. An author for U.S. Law has three parts; the Legislative Body (U.S. House, or U.S. Senate), the Number of the Congress and either 1st or 2nd session. For example;

U.S. House, 99th Congress, 2nd Session.

U.S. Law also has a title and section within the United States Code (the name for the collected laws in the U.S.). References are written as: Title Number USC § Section Number. For example; 18 USC § 66. The § is produced with the \S macro.

As with UK Law, before citing the reference you should include the Title and Section number form in your text. Such as; ... in 18 USC § 66 [8] ...

```
@book{cite-key,
  author = {{U.S. House, Number of
    Congress, Number of Session}},
  number = {Title Number USC {\S} Section
    Number},
  title = {Title of the Act},
  url = {http://www.gpo.gov/linktolaw.pdf
    },
  year = {Year Enacted}
}
```

- [8] U.S. House, Number of Congress, Number of Session, *Title of the Act*, Title Number USC § Section Number. Year Enacted. [Online]. Available: <http://www.gpo.gov/linktolaw.pdf>.

3) *E.U. Directives and Regulations*: Citing E.U. Directives is a mixture of the U.K. and U.S. styles with some fixed values and others needing to be replaced with actual values. To cite them in your text refer to them by the Directive or Regulation Number which has the form of Year/Serial/EC. For example; ... in 2002/96/EC [9] ... The Journal Title must *always* be ‘Official Journal’. The author must, similarly, *always* be ‘European Commission’.

The full title includes the prefix ‘Directive Number of the European Parliament and of the Council of Date on ’ then the actual title. For example; “Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on Waste Electrical and Electronic Equipment”.

```
@article{cite-key,
  author = {{European Commission}},
  journaltitle = {Official Journal},
  pages = {Entry Number in Journal},
  title = {Full Title of the Directive},
  url = {URL to Statute},
  year = {Year of Publication},
}
```

- [9] European Commission, “Full title of the directive,” *Official Journal*, Entry Number in Journal, Year of Publication. [Online]. Available: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2015:003:TOC>.

F. Manuals and Reference Guides

Manuals and Reference Guides are different from Books when cited, as they normally have editions and are issued by an organisation rather than a specific author. The references still need to be cited in the text [10].

```
@manual{cite-key,
  address = {Country of Organisation},
  edition = {Edition},
  organization = {Organisation},
  title = {Full Title of Manual},
  url = {URL to Manual},
  year = {Year Issued}
}
```

- [10] *Full title of manual*, Edition, Organisation, Country of Organisation, Year Issued. [Online]. Available: <http://urlto.manual.com/manual.pdf>.

G. Patents

There is one peculiarity when referencing Patents. Patents must have a type, one of three possible options; patentjp (Japanese Patent), patentus (U.S. Patent), or patent (Any Other Patent). When citing a patent in the text, include the patent number in the sentence. For example; ... under patent 12345 [11] ...

```
@patent{cite-key,
  author = {Last Name, First and Second
    Inventor},
  number = {Patent Number},
  title = {Title of Invention},
  type = {patent},
  year = {1992}
}
```

- [11] F. Last Name and S. Inventor, “Title of invention,” pat. Patent Number, 1992.

H. Periodicals

Periodicals differ from magazines in that they have an irregular publication schedule. They also tend to be focused on one specialist subject area rather than whole fields like regular journals are. Referencing in the text should be handled in the same way as a book [12].

```
@periodical{cite-key,
  editor = {Last Name, First and Author,
    Second},
  date = {2010-01-01},
  title = {Title of the Issue},
  series = {Title of the Periodical},
  url = {http://www.urltoperiodical.com/
    issue.pdf}
}
```

- [12] F. Last Name and S. Author, Eds., *Title of the Issue*, Title of the Periodical Jan. 1, 2010. [Online]. Available: <http://www.urltoperiodical.com/issue.pdf>.

I. Standards

There are two different types of citations for standards, depending on whether the standard is issued by an international body or an industry body.

1) *International Standards*: International Standards do not have explicit authors, instead use the body name and the standard number. When referencing the standard refer to the standard number before the citation. For example; ... IEEE Standard 802.11 [13] ...

```
@misc{cite-key,
  howpublished = {{Body Name} Std.
    Standard Number},
  title = {Standard Title},
  year = {Year Issued}
}
```

[13] *Standard title*, Body Name Std. Standard Number, Year Issued.

2) *Industry Standards*: Industry Standards are cited as if they were articles but using the @misc reference type. Refer to the standards series and the number in your text when citing the resource. For example; ... RFC 2555 [14] ...

```
@misc{cite-key,
  author = {Last Name, First and Author,
    Second},
  howpublished = {{Series Abbrev.} and
    Number},
  month = {Month},
  number = {Number},
  organization = {Industry Body},
  publisher = {Industry Body Abbrev.},
  series = {Standards Series},
  title = {Standards Title},
  url = {http://www.urltobody.com/
    standard.pdf},
  year = {Year Issued}
}
```

[14] F. Last Name and S. Author, *Standards title*, Series Abbrev. and Number, Industry Body, Jan. Year Issued. [Online]. Available: <http://www.urltobody.com/standard.pdf>.

J. Technical Reports

Technical reports are produced both in academia and industry. These are similar to journal articles, but have not had the same rigorous peer review as a journal would have. When referring to a technical report in the text you would include the report number with the citation. Example; ... in TR-001 [15] ...

```
@report{cite-key,
  address = {City, Country of Institution
    },
  author = {Last Name, First and Author,
    Second},
```

```
  institution = {Institution},
  number = {Report Number},
  title = {Report Title},
  type = {Report Type},
  year = {1986}
}
[15] F. Last Name and S. Author, "Report title," Institution, City, Country of Institution, Report Type Report Number, 1986.
```

K. Theses and Dissertations

Master's level and Doctoral (Ph.D.) theses can also be referenced, for example in a related work section. The @thesis resource has a type field, which must be one of mathesis (Master's level) or phdthesis (Doctoral). When citing a thesis, refer to the author's name before the citation. Example; ... as shown by Bloggs [16] ...

```
@thesis{cite-key,
  author = {Last Name, First},
  institution = {Department, Academic
    Institution},
  location = {City, Country},
  title = {Thesis Title},
  type = {Type},
  year = {Year Completed}
}
```

[16] F. Last Name, "Thesis title," Type, Department, Academic Institution, City, Country, Year Completed.

III. ONLINE RESOURCES

Online resources are specifically found online, not be confused with other print resources that can be found online. For example, a journal article found online, the @article type (as shown in the previous section) should be used including the url field. Do not use one of the forms in this section.

A. Blogs and Forums

Blogs can be treated as if they were periodicals, each post being an 'issue'. As such the url field becomes required. The urldate field *must* be included as the author can change posts after the point in time the resource was added to the database. Cite the resource in your text in the same manner as a book [17].

```
@periodical{cite-key,
  date = {2010-01-01},
  editor = {Last Name, First and Author,
    Second},
  title = {Title of the Post},
  series = {Title of the Blog/Forum},
  url = {http://www.urltoblog.com/post},
  urldate = {2010-01-01}
}
```

[17] F. Last Name and S. Author, Eds., *Title of the Post*, Title of the Blog Jan. 1, 2010. [Online]. Available: <http://www.urltoblog.com/post> (visited on Jan. 1, 2010).

B. Mailing List Posts

Mailing List Posts are treated as if they were periodicals, each post being an ‘issue’. The `url` field is required and should point to a public archive of the list. The `urldate` field should be included as the archives may be closed or lost. You would include the reference in your text as you would a book [18].

```
@periodical{cite-key,
  date = {2010-01-01},
  editor = {Last Name, First},
  title = {Subject of the Post},
  series = {Mailing List Name},
  url = {http://www.urltolist.com/
    archives},
  urldate = {2010-01-01}
}
```

[18] F. Last Name, Ed., *Subject of the Post*, Mailing List Name Jan. 1, 2010. [Online]. Available: <http://www.urltolist.com/archives> (visited on Jan. 1, 2010).

C. Software

Quite often when projects/research makes use of a piece of software, the author(s) will request that the software itself is cited - as a form of advertising. In your text, at the first reference to the software name include the citation [19], but only once. When entering it into the Bib \LaTeX database use the `@manual` type.

```
@manual{cite-key,
  author = {Last Name, First and {
    Corporation Inc.}},
  note = {version},
  title = {Software Name},
  url = {http://www.urltoauthor.com/
    software},
  urldate = {2014-12-05},
  year = {1999-2014}
}
```

[19] F. Last Name and Corporation Inc., *Software name*, version, 1999-2014. [Online]. Available: <http://www.urltoauthor.com/software> (visited on Dec. 5, 2014).

D. Websites

Citing websites in the text should be approached in the same way as for books [20]. However in the Bib \TeX source, the `@online` resource type should be used. **Note:** If the website being cited is Wikipedia, please see the next section for more explicit instructions.

```
@online{cite-key,
  author = {{Page Author} and {Site
    Owner}},
  title = {Page Title},
  url = {http://www.urltothepage.
    com/needed},
  urldate = {2014-12-05},
```

```
  year = {Year Page Created}
}
```

[20] Page Author and Site Owner. “Page title.” (Year Page Created), [Online]. Available: <http://www.urltothepage.com/needed> (visited on Dec. 5, 2014).

E. Wikipedia Articles

Whilst Wikipedia is a website, the Wikimedia Foundation have stricter rules when it comes to citing their articles. This form must be used when citing their articles. Include a reference in the text in the same way as books or websites [21]. The only items that can be changed to comply with Wikipedia’s licence is the Article Title, URL and Year Article Updated. The `urldate` field must be included as the article could be updated later or even removed.

```
@online{cite-key,
  author = {{Wikipedia Contributors}},
  title = {Article Title --- {Wikipedia
    {,} The Free Encyclopedia},
  url = {http://en.wikipedia.org/wiki/
    article},
  urldate = {2014-12-05},
  year = {Year Article Updated}
}
```

[21] Wikipedia Contributors. “Article title — Wikipedia, the free encyclopedia.” (Year Article Updated), [Online]. Available: <http://en.wikipedia.org/wiki/article> (visited on Dec. 5, 2014).

IV. HEALTH WARNING

This document presents the style guidelines for the School of Computer Science at Bangor University only. It may be suitable for other disciplines, however if used outside of the Computer Science department, check with your supervisor before following the advice herein.

Whilst the examples shown in this document will produce the correct Bib \LaTeX output, this is by no means the only way to create citations. On occasion, there may be need to deviate from the ‘correct’ method due to unavailable data or poorly maintained bibliography databases. In this case, check with your supervisor, the School or the University Library if a suitable alternative cannot be found.

When using Google Scholar, the citation items provided most often of the `@article` resource type, even when this is not appropriate. You should always check the output of any tool or service for completeness and accuracy. If in doubt, check with your supervisor or a University Librarian.