

Stanford ASL BibTeX File Usage Standards

Main Points

Autonomous Systems Laboratory

Updated January 21, 2017

Rev. 1.0.2

1. Use `main.bib` for non-ASL references, and use `ASL_papers.bib` for ASL references.
2. Use Jabref 3.8.X with ASL lab preferences imported.
3. Check references marked `\color{red}` by going back to the original source.
4. Use the actual documents or publisher's website to gather information.
5. Use your SUNet ID name to mark yourself owner of new or modified entries.
6. Use the correct entry types.
7. Properly format fields and strings.
8. Use only strings for month, journal, publisher, institution, organization, and school fields (also booktitle for `@inproceedings` and title for `@proceedings`).
9. Autogenerate `bibtexkeys`, but do not regenerate `bibtexkeys` for entries that are no longer marked `\color{red}`.
10. Do not take entries marked `\color{red}` as an indication of how to choose entry types and format fields. In most cases they are wrong.

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1 Introduction

1.1 Preliminaries

- Install the latest v3.8.X version of JabRef, and use it for modifying the bib files. Avoid modifying bib file source text directly!
 - If you already have JabRef installed, make sure it is at least v3.8.1 (Install files are available at <http://builds.jabref.org/> or at `svn/asl/bib/JabRef v3.8.1`)
- Import lab preferences
 - Options → Preferences → Import preferences
 - The preference file is `svn/asl/bib/ASL_JabRef_Preferences.xml`
- When modifying the lab bib files, make sure JabRef is in BibTeX mode!
 - This should be shown in window title. If says Biblatex instead:
 - File → Switch to BibTeX Mode
- Set up automatic entry ownership
 - Options → Preferences → General
 - Check “Mark new entries with owner name”
 - Set name as your SUNet ID name (e.g. frossi2)

1.2 ASL Bib Files

- **main.bib** - Main shared bib file containing references not authored by the lab.
- **ASL_papers.bib** - Shared bib file containing references authored by the lab. Should be used in addition to main.bib for bibliographies in publications. Also used in the page generator for the publications section of the ASL website.
- **main_legacy.bib** - Old, smelly, confused version of main.bib, used by most lab papers before 2017. (Viewer discretion is advised.)

2 Adding BibTeX Entries

1. Find the bibliography information. Some options:
 - Extract the information from the publication itself, or the publishers website.
 - For a baseline, you can also search through Google Scholar (you can display BibTeX source links in the search through Settings → Search Results → Bibliography manager → Show links to import citations into BibTeX)
 - * **Warning:** The information in Google Scholar is often inaccurate! (bad spellings, mistaken numbers, mixed up fields, etc.) Always double-check this info with the actual publication or publisher's website!
2. Update your SVN working repository to get the latest version of the bib file
3. Open the bib file in JabRef
4. Search for entry to see if it already exists
 - (a) If it already exists:
 - i. If the fields are marked with `\color{red}`, the entry is unverified. Verify the entry type and field information, fill in missing fields, and adjust the formatting to meet current standards.
 - ii. If the fields are not marked with `\color{red}` but you notice errors, send the owner a disappointed message. You expected better of them.
 - iii. If the fields are not marked with `\color{red}` and look good, great! Next time see the owner, give them a nod and a wink. Don't explain why.
 - (b) If it does not exist, make your own!
 - i. Create a new entry (click the green plus button, or Ctrl + N)
 - ii. Choose the entry type based on the guidelines below.
 - iii. Use the JabRef GUI to fill in the fields based on the guidelines below. (Do not modify the bib file source text directly for adding entries!)
 - iv. Verify the information from the original publication or the publishers website if possible.
5. For each of the entries that you add or modify, make yourself the new owner.
 - (a) When modifying the entry fields, Owner is under the General tab.
 - (b) Press the Auto button if you have it set up to fill in your SUNet ID Name, or type it in manually.
6. Save the bib file, and commit the new version to SVN!

3 Entry Types

The allowed entry types are based on the BibTeX standard and the IEEEtran BibTeX Style. (see <https://www.ctan.org/tex-archive/macros/latex/contrib/IEEEtran/bibtex> for the latest version of the IEEEtran guidelines) Most of the disallowed entry types are BibLaTeX types which are not often supported by publishers.

3.1 Entry types that are used:

- **Article** - An article from a journal, magazine, newspaper or other periodical which forms a self-contained unit with its own title.
- **Book** - A book with an explicit publisher.
- **InBook** - A part of a book, such as a chapter/section/part or selected pages. Use rather than @incollection for chapters/sections/parts with no title, or where you do not want to cite the title.
- **InCollection** - A part of a book which has its own title, such as a titled chapter, section, part, or element in a collection.
- **Booklet** - A work that is printed and bound, but without a named publisher or sponsoring institution. Use rather than @unpublished for works that were distributed by some means. Not often used.
- **Manual** - Technical or other documentation, not necessarily in printed form.
- **InProceedings** - An article in a conference proceedings
- **Proceedings** - For citing entire conference proceedings. Rarely used.
- **MastersThesis** - A Masters thesis.
- **PhdThesis** - A PhD thesis.
- **TechReport** - A technical report published by a school or other institution.
- **Unpublished** - A document having an author and title, but not formally published. Do not include papers here that are submitted or under review!
- **Online** - This entry type is intended for sources such as web sites which are intrinsically online resources. For works in online journals, use @article instead.
- **Patent** - A patent or patent request.
- **Periodical** - A complete issue of a periodical (a magazine or newspaper published at regular intervals, or a special issue of a journal). Rarely used.
- **Standard** - For proposed or formally published standards. Rarely used.
- **Misc** - Used when none of the other entries are applicable. Examples: personal correspondence, technical-report-like entries that lack an institution, white papers, laws/regulations, presentations, etc.

3.2 Entry types that are never used:

- **MvBook** - Do not use. Intended for multi-volume books, but use @book instead.
- **BookInBook** - Do not use. Intended for works originally published as a stand-alone book (for example books reprinted in the collected works of an author). Use @inbook instead, or cite the original printing using @book.
- **SuppBook** - Do not use. Intended for supplemental material in a @book, such as prefaces, introductions, forewords, afterwords, etc. which often have a generic title only. Use @inbook instead.
- **Collection** - Do not use. Intended for a single-volume collection with multiple, self-contained contributions by distinct authors which have their own title. The work as a whole has no overall author, but it will usually have an editor. Use @book instead.
- **MvCollection** - Do not use. Intended for multi-volume collections, but use @book instead.
- **SuppCollection** - Do not use. Intended to be similar to @suppbook but related to the @collection entry type. Use @incollection instead.
- **SuppPeriodical** - Do not use. Intended to be similar to @suppbook but related to the @periodical entry type. Use @article or @periodical instead.
- **Conference** - Do not use. Use @inproceedings instead.
- **MvProceedings** - Do not use. Intended for multi-volume proceedings, but use @proceedings instead.
- **Reference** - Do not use. Intended for a work of reference such as an encyclopedia or dictionary. This is a more specific variant of the generic @collection entry type, but use @book instead.
- **InReference** - Do not use. Intended for an article in a work of reference, but use @inbook or @incollection instead.
- **MvReference** - Do not use. Intended for multi-volume references, but use @book instead.
- **Thesis** - Do not use. Use @mastersthesis or @phdthesis instead.
- **Conference** - Do not use. Identical to @inproceedings, so use @inproceedings instead.
- **Electronic** - Do not use. Use @online instead.
- **WWW** - Do not use. Use @online instead.
- **Report** - Do not use. Intended for a technical report, research report, or white paper published by a university or some other institution in the biblatex standard. Use @techreport instead.
- **Set** - Do not use. A special type intended for entry sets. Cite each entry individually instead.

4 Field Types

A list of the necessary, conditional, and disallowed fields for each entry field can be found in the appendix or in the Google Drive spreadsheet at this link: <https://goo.gl/1QRuWZ>, along with additional specialized comments. Fields for each entry type are also categorized automatically in JabRef through the ASL lab preferences. However, there are specific conventions for each field:

4.1 General Standards

4.1.1 Title/Booktitle

- Enter the title with capitalization and punctuation as printed in the original publication.
 - If the original publication is not available, use the publishers website.
 - If publisher information is also not available, use a tool like www.titlecapitalization.com to produce title case, AP style. Then modify the capitalization of names, acronyms, etc. as needed.
- Include curly braces { } (only) around words containing letters that should always maintain a particular capitalization. The bibliography style used will take care of the rest.
 - Braces between characters destroys kerning, so when used they should be placed around entire words.
 - * One exception is when part of a word needs to be uppercase, but the first letter depends on the bib style. In this case, just place braces around the uppercase characters.
- Examples:
 - Names: Martin Luther King Jr. → {Martin} {Luther} {King} {Jr.}
Van der Waals Forces → {Van} {der} {Waals} Forces
 - Acronyms: FMT* → {FMT*}
AMoD → {AMoD}
 - Technical Terms: type-II Ge/Si → type-{II} {Ge/Si}

4.1.2 Author/Editor

- List authors in the following format:

[Author1 Lastname Full], [Author1 Firstname Initials] [Author1 Middlename Initials] and [Author2 Lastname Full], [Author2 Firstname Initials] [Author2 Middlename Initials] and [Author3 ... etc.

- List all authors. Let bib styles handle truncating the list, adding et. al.
- Report only middle names that are included in that particular reference.
- Put a period after every reported initial, and don't forget the "and" between authors or the comma between the first and last names.
- Include a space between successive initials, except when a hyphen is present.

- * Example: Chung, S.-J. and Ahsun, U. and Slotine, J.-J. E.

- For curly braces { }:

- * First/Middle initials:

- Include braces only around individual special characters.
- Do not enclose multiple initials or hyphens in braces.
- Example: Laris, {\ 'A}. M.

- * Last names:

- Include braces only around names that contain punctuation or special characters. Leave the rest to the bib style.
- Be sure the brace the full last name, not just parts!
- Examples: Artstein, Z. and {Rakovi\ 'c}, S. V.
{Agha-mohammadi}, A. and Agarwal, S.

4.1.3 Journal/Publisher/Organization/Institution/School

- Always and only use strings. See the strings section below.

4.1.4 Volume/Number

- Use only arabic numerals. Example: 14
- Do not use Roman numerals, ordinals, spelled out numbers, Chinese characters, or any elements not contained in $\mathbb{N} \setminus \{0\}$.

4.1.5 Edition

- For editions 1st - 10th, use capitalized ordinal word form. Examples: Second Tenth
- For editions 11th and higher, use Arabic ordinal form. Examples: 11th 42nd
- Use when an edition number is explicitly printed, or for original editions after a second edition has been published (mark as First). Otherwise leave blank.

4.1.6 Chapter

- The chapter field may be used to cite a chapter, part, or section (choose one) of a reference.
 - If citing a part or a section, fill in the Type field with "part" or "sec." to override the default "ch." in some bib styles.
- Follow the original formatting of the chapter/part/section designator in most cases. Examples: 12 4-2 6.3.3 IV B 5A
 - If the designator is spelled out or is not alphanumeric, replace it with Arabic numerals. Example: Seven → 7

4.1.7 Month

- Use one of the following strings:
#jan# #feb# #mar# #apr# #may# #jun# #jul# #aug# #sep# #oct# #nov# #dec#
- JabRef has a drop-down list next to the Month field that can find the correct string automatically.

4.1.8 Year/Yearfiled

- Use the full year by the Gregorian calendar, omitting CE or AD. Example: 2001
- For references dated prior to 1 CE, add BCE. Example: 499 BCE
- If the exact publication year is unknown, preface the year with "ca." Example: ca. 300 BCE

4.1.9 Pages

- Place two dashes between page numbers. Example: 400--413
- In @article, cite the page numbers as printed in the journal. This may not correspond to the page numbers in PDF versions of the paper! (Example: 1--16 is probably wrong.)
 - If an article has not yet been assigned page numbers, leave this field blank.
- In @inbook, when already citing a chapter/part/section, do not also include pages! Choose one or the other.

4.1.10 Note

- The note field is used in the following circumstances:
 - Listing URLs. This is a required field for @online.
 - * Use the format: Available at \url{<insert url>}
 - * Example: Available at \url{http://arxiv.org/abs/0806.3881}
 - Commenting on the status of a reference:

* In preparation	When a reference is not yet submitted
* Submitted	When a reference is under review
* To appear	When a @inproceedings is accepted but not yet presented
* In press	When a non-@inproceedings is accepted but not yet printed
* Declined	When a reference was declined
* Extended version	For extended versions of papers

4.1.11 Keywords

- This field is completely optional and does not affect the way standard bib styles display their entries. However, it can be useful if you would like to group entries by topic in JabRef.
- Use a simple comma-separated list.

Example: sampling-based algorithms, trajectory optimization, optimal control, spacecraft guidance, proximity operations, Clohessy-Wiltshire-Hill dynamics

4.1.12 Bibtexkey

- Bibtexkeys can be generated automatically in JabRef by selecting an entry and clicking the key-shaped button, or by Ctrl-G.
 - Only generate keys after the information in the entry is correct!
 - If the ASL JabRef preferences are loaded correctly, the default key pattern in the preferences should be `[authors2] [year]`
- The required bibtexkey convention is as follows:
 - **Default:** The full last name of up to and including the first 2 authors, followed by the full year.
 - * Original capitalization is maintained.
 - * The following punctuation is removed: `~ # ^ () ; : , . ' "`
 - * Modifications to characters (such as various accents) are not retained.
 - * If there are more than 3 authors, "EtAl" is appended to the list of authors.
 - * If the new bibtexkey collides with an existing entry's bibtexkey, "b" is appended at the end. The next colliding bibtexkey will receive a "c", etc. The original entry's bibtexkey will remain unchanged.
 - * If the reference has editors and no authors, the editor(s) names are used instead.
 - * Examples: `YoshidaSashida1993` `TedrakeManchesterEtAl2010`
 - **No Author/Editor:** For entries that do not have authors or editors, but have an organization, institution, school, or publisher (listed by first to last preference), use the key pattern `[organization or institution or school or publisher string] : [year]` (not a standard JabRef key pattern).
 - * This simply concatenates the string used in the given field with a colon and the full year. (Neglecting the # symbols)
 - * Note that this will need to be done manually.
 - * Examples: `ios_NASA:2012` `pub_Springer:2008`
 - **Proceedings:** Similarly, for @proceedings, use the key pattern `[title string] : [year]` (not a standard JabRef key pattern).
 - * Example: `proc_IEEE_ICRA:2015`
 - **Other:** For other entries that do not happen to have authors, editors, organizations, institutions, schools, or publishers (e.g. some @online and @misc), use the JabRef key pattern `[title:abbr] : [year]`
 - * This takes the first letter of each word in the title, using capitalization according to titlecase, and appends the full year at the end.
 - * Example: `title = {Anonymous Blog Post on Robotics August Update}`
→ bibtexkey: `ABPoRAU:2016`

5 Strings

A string is required as the sole input into all journal, publisher, institution, organization, and school fields, as well as booktitle for @inproceedings and title for @proceedings. Strings are marked in JabRef by placing their label between two # symbols. When your bibliography is rendered, the string label will be replaced by the corresponding content in the strings database, ensuring that it is rendered identically across all entries and will be consistent with other papers.

5.1 Searching for Strings

- There are two ways to search for strings for use in your entries:
 1. Open the String Editor in JabRef (BibTeX → Edit strings or Ctrl + T)
 - Due to the name conventions for string labels, the strings should be organized into their respective categories.
 2. Open the bib file source text.
 - The strings will be listed first and you can search with Ctrl + F.
- Always double-check to make sure the string content matches what you need! Sometimes the names of events change over the years! If it does not match, you will need to make a new string (see [note] in string labels).

5.2 Adding Strings

- There are two ways to add new strings:
 1. Use the String Editor in JabRef:
 - Press the + button to add a new label. Then find the label and add its corresponding content.
 2. Modify the bib file source text directly. (not recommended!)
 - Add to the list of strings at the beginning of the file using the following format:
`@STRING{<insert string label> = {<insert string content>}}`
 - Place your new string in alphabetical order by label.

5.3 General String Formatting Guidelines

- Always place curly braces { } around entire string content to freeze capitalization and other formatting. Other than this, no curly braces should be used.
- When modifying a string label, always update the entries that were using the previous version of the string label!

5.4 String Formatting Preliminaries

5.4.1 Prefixes

- To group categories of strings in the string database, use prefixes in the string label:
 - `proc_` Proceedings (for booktitle in `@inproceedings` and title in `@proceedings`)
 - `conf_` Conferences (for title in `@proceedings`)
 - `jrn_` Journals
 - `pub_` Publishers
 - `ios_` Institutions, Organizations, and Schools

5.4.2 Organizers

- String labels may be further categorized by organizer, if an organizer coordinates many conferences or journals. These are used in conference, journal, and proceedings strings and come after the prefix. Some examples:
 - `IEEE_` Institute of Electrical and Electronics Engineers
 - `AIAA_` American Institute of Aeronautics and Astronautics
 - `ASME_` American Society of Mechanical Engineers
 - `AAS_` American Astronomical Society
 - `ACM_` Association for Computing Machinery
 - `ESA_` European Space Agency
 - `IFAC_` International Federation of Automatic Control
 - `SIAM_` Society for Industrial and Applied Mathematics
 - `ASEE_` American Society for Engineers Education
 - `AAAI_` Association for the Advancement of Artificial Intelligence
 - `SPIE_` International Society for Optics and Photonics
 - `Spr_` Springer
- When multiple organizers from this list are involved in a conference or journal, use the one that the conference or journal lists first.
- If the conference or journal is not coordinated by a common organizer, the organizer can be omitted.

5.4.3 Number

- If a conference or journal is numbered in the string content, then the string label should include the number to avoid collisions.
- This will simply be an underscore and a cardinal number in Arabic numerals appended to the end of the label. Examples: `_1` `_7` `_22` `_105`

5.5 String Formatting Standards

5.5.1 Proceedings

- String label: [prefix] [organizer] [event] [note] [number]
 - [event]: Use the official acronym for the event, if it exists, including the same capitalization. Neglect any punctuation.
 - * If an official acronym does not exist, use a common unofficial acronym/abbr. or create a new acronym (using the first letters of the capitalized letters in the conference name).
 - [note]: When an event changes its type, populate with _conf, _symp, etc.
- String content:
 - References the proceedings publication or collection of papers presented at an event.
 - Even if the string content is identical to the conf_ version, make a proc_ version when citing papers and other publications from the event.
- Examples:
 - proc_IEEE_ICRA {Proc.\ IEEE Conf.\ on Robotics and Automation}
 - proc_WAFR {Workshop on Algorithmic Foundations of Robotics}
 - proc_ACM_IPSN_symp {Int.\ Symp.\ on Information Processing in Sensor Networks}
 - proc_ACM_IPSN_conf {Int.\ Conf.\ on Information Processing in Sensor Networks}

5.5.2 Conferences

- String label: [prefix] [organizer] [event] [note] [number]
 - [event], [note]: Use the exact same standard as for proceedings above.
- String content:
 - This is different from proc_ in that conf_ references the actual event, rather than the proceedings publication.
 - Even if the string content is identical to the proc_ version, make a conf_ version when citing the actual event. (For example, when citing a presentation using @misc)
- Examples:
 - conf_IEEE_ICRA {IEEE Conf. on Robotics and Automation}
 - conf_WAFR {Workshop on Algorithmic Foundations of Robotics}
 - conf_ESA_ASTRA_12 {12th Symp. on Adv. Space Technologies in Robotics and Automation}

5.5.3 Journals

- String label: [prefix] [organizer] [journal]
 - [journal]: Use the same standard as [event] for proceedings above.
(read "event" → "journal" and proc_ → jrn_)
- String content:
 - There should be no jrn_ that is identical in content to a proc_. Either the collection of publications related to an event is a journal or conference proceedings. It cannot be both.
 - * If a jrn_ and a proc_ have identical content, that is an indication that someone is using @inproceedings when they should be using @article, or vice versa. Delete the incorrect string and correct the entry types of the associated entries.
- Examples:
 - jrn_IEEE_RAL {IEEE Robotics and Automation Letters}
 - jrn_IJRR {The International Journal of Robotics Research}

5.5.4 Publishers

- String label: [prefix] [publisher]
 - [publisher]: Check the following standards in order (neglecting punctuation in all cases)
 - * If the publisher has an official acronym, use it. Otherwise:
 - * If publisher name is an acronym followed by "Press", use the preceding acronym.
 - * If the publisher name is a single word, use that word with the first letter capitalized.
 - * In all other cases, use a common unofficial acronym/abbreviation or create a new acronym (using the first letters of the capitalized letters in the conference name).
- String content:
 - Should simply be the full name of the publisher, including words like "Press", "Publishing", etc.
 - Use the official acronym if it is widely used
- Examples:
 - pub_SIAM {SIAM}
 - pub_MIT {MIT Press}
 - pub_AMS {American Mathematical Society}
 - pub_Springer {Springer}

5.5.5 Institutions, Organizations, and Schools

- String label: [prefix] [type] [entity] [sub]
 - [type] Possible entries:
 - * univ_ Use if the entity is a university
 - [entity]:
 - * If the entity is a university:
 - If it has a common acronym or abbreviation, use that. (e.g. MIT, Caltech, UPenn, PennState)
 - Otherwise, if 1-2 capitalized words are left over when "University" is removed, use those words in CamelCase. (e.g. IowaState, Waterloo)
 - In all other cases, create a new acronym using the first letters of the capitalized letters in the name. (e.g. UIUC)
 - * If the entity is not a university:
 - Use the official acronym if one exists.
 - Otherwise, if the name is a single word (when articles and generic elements like Co. and Inc. are removed), use that word with the first letter capitalized.
 - In all other cases, use a common unofficial acronym/abbr. or create a new acronym (using the first letters of the capitalized letters in the conference).
 - [sub]:
 - * When referring to a subset of an entity, such as a department, laboratory, etc. list the acronym or abbreviation here, preceded by an underscore.
- String content:
 - Should be the full name of the entity, with the exception of very long names where the acronym is more commonly used.
- Examples:

– ios_univ_MIT	{Massachusetts Institute of Technology}
– ios_univ_MIT_EECS	{Dept. of EECS, MIT}
– ios_univ_MIT_CSAIL	{MIT CSAIL}
– ios_univ_Washington	{University of Washington}
– ios_univ_WashingtonState	{Washington State University}
– ios_univ_UCLB	{Universit\'e Catholique de Louvain, Belgium}
– ios_Boeing	{The Boeing Company}
– ios_MathWorks	{The MathWorks, Inc.}
– ios_USDT	{U.S. Department of Transportation}
– ios_NASA	{NASA}

Appendix A Fields for Entry Types

Shown here are the **required** fields and *special circumstances* fields for each entry type, along with comments to address common questions. The full list, including disallowed fields which are supported by the IEEEtran style, can be found at this Google Drive spreadsheet: <https://goo.gl/1QRuWZ>. The **bibtexkey** and **owner** fields are required for all and *note* is special circumstances for all except @unpublished and @online, where it is required. A slash between required fields indicates either may be populated.

@article

- **author, title, journal, volume, number, pages, year**

@book

- **author/editor, title, publisher, edition, year**
- May have an author, an editor or both!

@inbook

- **author/editor, title, chapter/pages, publisher, edition, year**
- *type*
- May have an author, an editor or both!
- Choose either chapter or pages. Type is for modifying chapter type.

@incollection

- **author, title, booktitle, publisher, edition, year**
- *chapter, type*
- Title is the name of section being cited.
- Booktitle is the name of the overall containing book/collection.
- Choose either chapter or pages. Type is for modifying chapter type.

@booklet

- **author, title, howpublished, organization, year**
- Options for howpublished TBD.

@manual

- **author, title, organization, year**

@inproceedings

- **author, title, booktitle, year**
- Title is the name of the article.
- Booktitle is the name of the proceedings.

@proceedings

- **title, year**

@mastersthesis

- **author, title, school, year**

@phdthesis

- **author, title, school, year**

@techreport

- **author, title, institution, year**
- *type*
- Type can be used to override "Tech. Rep." (e.g. Working Paper)

@unpublished

- **author, title, note**
- *year*
- Usually just put unpublished in note field

@online

- **author/organization, title, howpublished, note**
- Options for howpublished TBD.
- Note must include the URL.

@patent

- **author, title, nationality, number, year/yearfiled**
- *type*
- Year is when the patent was granted.
- Yearfiled is when the patent was filed.
- Under type, if the patent has not yet been granted, enter Patent Request

@periodical

- **title, volume/number/month, year**

@standard

- **title, organization/institution, year**
- *type, revision*
- Type can be used to override default description "std."
- Revision can be used to provide a revision number (e.g. 5.2)

@misc

- *author, title, howpublished, organization, pages, month, year*