



UNIVERSITÀ DI PAVIA

Collegio Alessandro Volta
Via Adolfo Ferrata, 17, Pavia (PV)



LATEX

Lecture 6 – Bibliography, References & Special Documents

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Bibliography Management

- There are three main options in LaTeX:
 - `bibtex`;
 - `natbib`;
 - `biblatex`.
- `biblatex` is a modern option for processing bibliography information, provides an easier and more flexible interface and a better language localization than the other two options.
- A minimal working example of the `biblatex` package is shown on the right.

```
\documentclass[letterpaper,10pt]{article}
\usepackage{biblatex} %Imports biblatex package
\addbibresource{sample.bib} %Import the bibliography file

\begin{document}
Let's cite! Einstein's journal paper \cite{einstein} and
Dirac's
book \cite{dirac} are physics-related items.

\printbibliography %Prints bibliography

\end{document}
```

Let's cite! Einstein's journal paper [2] and Dirac's book [1] are physics-related items.

References

- [1] Paul Adrien Maurice Dirac. *The Principles of Quantum Mechanics*. International series of monographs on physics. Clarendon Press, 1981. ISBN: 9780198520115.
- [2] Albert Einstein. "Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]". In: *Annalen der Physik* 322.10 (1905), pp. 891–921. DOI: <http://dx.doi.org/10.1002/andp.19053221004>.

Try it by yourself

```
\documentclass{article}

\usepackage[backend=biber,style=alphabetic,sorting=ynt]{biblatex}
\addbibresource{sample.bib}

\title{Bibliography management: \texttt{biblatex} package}
\author{Overleaf}
\date{}

\begin{document}

\maketitle

Using \texttt{biblatex} you can display a bibliography divided
into sections, depending on citation type. Let's cite! Einstein's
journal paper \cite{einstein} and Dirac's book \cite{dirac} are
physics-related items. Next, \textit{The \LaTeX\ Companion} book
\cite{latexcompanion}, Donald Knuth's website \cite{knuthwebsite},
\textit{The Comprehensive Tex Archive Network} (CTAN)
\cite{ctan} are \LaTeX-related items; but the others, Donald Knuth's items,
\cite{knuth-fa,knuth-acp} are dedicated to programming.

\medskip

\printbibliography

\end{document}
```

Using `biblatex` you can display a bibliography divided into sections, depending on citation type. Let's cite! Einstein's journal paper [Ein05] and Dirac's book [Dir81] are physics-related items. Next, *The \LaTeX Companion* book [GMS93], Donald Knuth's website [Knu], *The Comprehensive Tex Archive Network* (CTAN) [Gre93] are \LaTeX -related items; but the others, Donald Knuth's items, [Knu73; Knu68] are dedicated to programming.

References

- [Ein05] Albert Einstein. "Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]". In: *Annalen der Physik* 322.10 (1905), pp. 891–921. DOI: <http://dx.doi.org/10.1002/andp.19053221004>.
- [Knu68] Donald E. Knuth. *The Art of Computer Programming*. Four volumes. Seven volumes planned. Addison-Wesley, 1968.
- [Knu73] Donald E. Knuth. "Fundamental Algorithms". In: Addison-Wesley, 1973. Chap. 1.2.
- [Dir81] Paul Adrien Maurice Dirac. *The Principles of Quantum Mechanics*. International series of monographs on physics. Clarendon Press, 1981. ISBN: 9780198520115.
- [GMS93] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The \LaTeX Companion*. Reading, Massachusetts: Addison-Wesley, 1993.
- [Gre93] George D. Greenwade. "The Comprehensive Tex Archive Network (CTAN)". In: *TUGBoat* 14.3 (1993), pp. 342–351.
- [Knu] Donald Knuth. *Knuth: Computers and Typesetting*. URL: <http://www-cs-faculty.stanford.edu/~uno/abcde.html>. (accessed: 01.09.2016).

The Bibliography file

```
@article{einstein,
  author = "Albert Einstein",
  title = "{Zur Elektrodynamik bewegter K{\o}rper}.
  ({German})
  [{On} the electrodynamics of moving bodies]",
  journal = "Annalen der Physik",
  volume = "322",
  number = "10",
  pages = "891--921",
  year = "1905",
  DOI = "http://dx.doi.org/10.1002/andp.19053221004",
  keywords = "physics"
}

@book{dirac,
  title = {The Principles of Quantum Mechanics},
  author = {Paul Adrien Maurice Dirac},
  isbn = {9780198520115},
  series = {International series of monographs on
physics},
  year = {1981},
  publisher = {Clarendon Press},
  keywords = {physics}
}
```

```
@online{knuthwebsite,
  author = "Donald Knuth",
  title = "Knuth: Computers and Typesetting",
  url = "http://www-cs-
faculty.stanford.edu/~uno/abcde.html",
  addendum = "(accessed: 01.09.2016)",
  keywords = "latex, knuth"
}

@inbook{knuth-fa,
  author = "Donald E. Knuth",
  title = "Fundamental Algorithms",
  publisher = "Addison-Wesley",
  year = "1973",
  chapter = "1.2",
  keywords = "knuth, programming"
}
```


Customizing the bibliography

```
\documentclass{article}
```

```
\usepackage[backend=biber,style=alphanumeric,sorting=ynt]{biblatex}  
\addbibresource{sample.bib}
```

```
\title{Bibliography management: \texttt{biblatex} package}  
\author{Overleaf}  
\date{May 2021}
```

```
\begin{document}
```

```
\maketitle
```

Using `\texttt{biblatex}` you can display a bibliography divided into sections, depending on citation type. Let's cite! Einstein's journal paper `\cite{einstein}` and Dirac's book `\cite{dirac}` are physics-related items. Next, `\textit{The \LaTeX\ Companion}` book `\cite{latexcompanion}`, Donald Knuth's website `\cite{knuthwebsite}`, `\textit{The Comprehensive TeX Archive Network}` (CTAN) `\cite{ctan}` are `\LaTeX`-related items; but the others, Donald Knuth's items, `\cite{knuth-fa,knuth-acp}` are dedicated to programming.

```
\medskip
```

```
\printbibliography[title={Whole bibliography}]
```

Whole bibliography

- [Ein05] Albert Einstein. “Zur Elektrodynamik bewegter Körper” [On the electrodynamics of moving bodies]. 322.10 (1905), pp. 891–921. DOI: <http://dx.doi.org/10.1007/BF01331968> and <https://arxiv.org/abs/1905.32210>.
- [Knu68] Donald E. Knuth. *The Art of Computer Programming*. Seven volumes planned. Addison-Wesley, 1968.
- [Knu73] Donald E. Knuth. “Fundamental Algorithms”. 1973. Chap. 1.2.
- [Dir81] Paul Adrien Maurice Dirac. *The Principles of Quantum Mechanics*. International series of monographs on physics. Oxford: Oxford University Press, 1981. ISBN: 9780198520115.
- [GMS93] Michel Goossens, Frank Mittelbach, and Leslie Lamport. *LaTeX Companion*. Reading, Massachusetts: Addison-Wesley, 1993.
- [Gre93] George D. Greenwade. “The Comprehensive TeX Archive Network (CTAN)”. In: *TUGboat* 14.3 (1993), pp. 3–12.
- [Knu16] Donald Knuth. *Knuth: Computers and Typesetting*. www-cs-faculty.stanford.edu/~uno/knuth-tex/ (01.09.2016).

Customizing the bibliography

```
\printbibliography[type=article,title={Articles only}]  
\printbibliography[type=book,title={Books only}]  
  
\printbibliography[keyword={physics},title={Physics-related only}]  
\printbibliography[keyword={latex},title={\LaTeX-related only}]
```

Articles only

- [Ein05] Albert Einstein. “Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]”. In: *Annalen der Physik* 322.10 (1905), pp. 891–921. DOI: <http://dx.doi.org/10.1002/andp.19053221004>.
- [Gre93] George D. Greenwade. “The Comprehensive Tex Archive Network (CTAN)”. In: *TUGBoat* 14.3 (1993), pp. 342–351.

Books only

- [Knu68] Donald E. Knuth. *The Art of Computer Programming*. Four volumes. Seven volumes planned. Addison-Wesley, 1968.
- [Dir81] Paul Adrien Maurice Dirac. *The Principles of Quantum Mechanics*. International series of monographs on physics. Clarendon Press, 1981. ISBN: 9780198520115.
- [GMS93] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The L^AT_EX Companion*. Reading, Massachusetts: Addison-Wesley, 1993.

Adding the bibliography to the ToC

```
\printbibliography[  
  heading=bibintoc,  
  title={Whole bibliography}  
]  
  
\printbibliography[heading=subbibintoc,type=article,title={Articles only}]
```

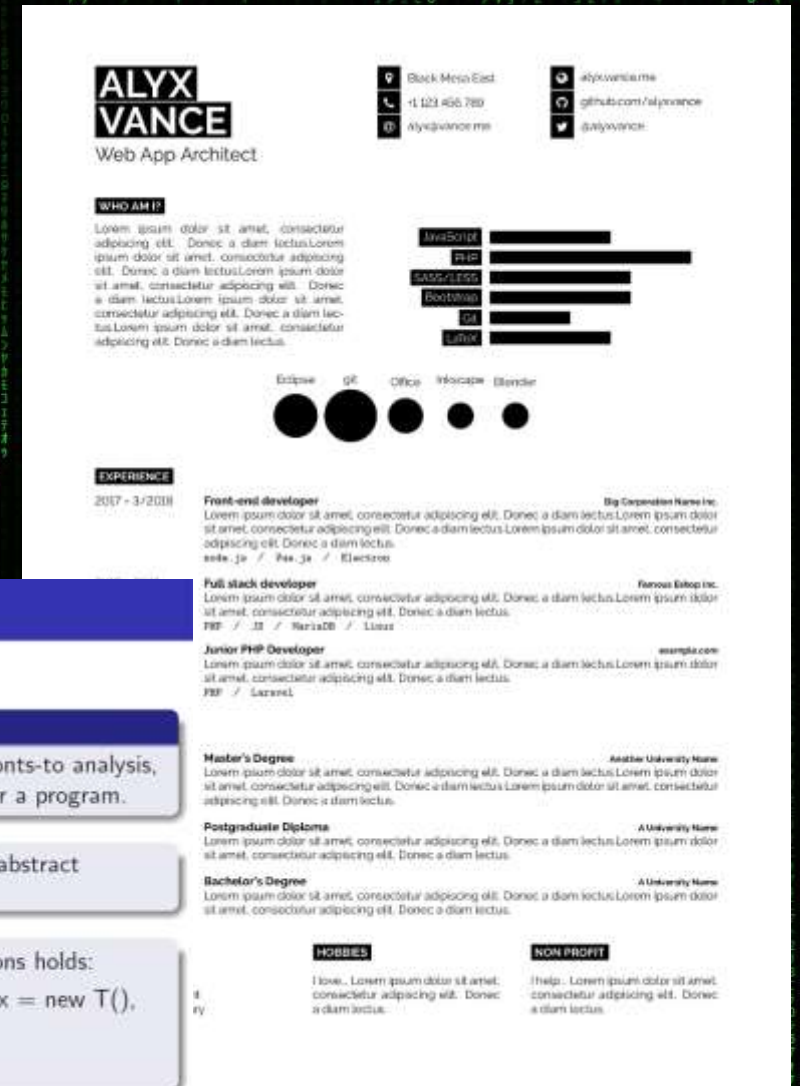


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Special documents

- LaTeX is the best tool for writing professional scientific articles, thesis, letters, academic journals, CVs, ...
- In the following slides we will see:
 - Academic Journals;
 - Thesis;
 - Letters;
 - Presentations;
 - Scientific Reports;
 - CVs & Resumes.



Academic Journals

AAS_{TeX} Template for submissions to AAS Journals (ApJ–AJ–ApJS–ApJL–PSJ–RNAAS) Official

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Author	American Astronomical Society
Last Updated	6 months ago
License	Other (as stated in the work)
Abstract	The American Astronomical Society (AAS) has developed a markup package to assist authors in preparing manuscripts intended for submission to all the AAS-affiliated journals. The journals are the Astrophysical Journal (ApJ), the Astronomical Journal (AJ), ApJ Supplements (ApJS), Letters (ApJL), The Planetary Science Journal (PSJ), and Research Notes of the American Astronomical society (RNAAS). The latest LaTeX classfile is AAS _{TeX} v6.3.1 and it can be obtained here . The sample631.tex template uses this classfile to illustrate

DRAFT VERSION: JUNE 2, 2022
Typeset using L^AT_EX default style in AAS_{TeX}

Template AAS_{TeX}Article with Examples: v6.3.1*

GREG J. SCHWARTZ¹, AUDREY MCNEER,¹
(AAS JOURNALS DATA EDITORS)

F.X. TIMMER,^{2,3} AMY HENDERSON,^{4,5} JULIE STEFFEN,^{4,5}

¹American Astronomical Society
1607 K Street NW, Suite 800
Washington, DC 20006, USA

²Arizona State University

³AAS Journals Associate Editor-in-Chief

⁴Technology Inc.

⁵AAS Director of Publishing

ABSTRACT

This example manuscript is intended to serve as a tutorial and template for authors to use when writing their own AAS Journal articles. The manuscript includes a history of AAS_{TeX} and includes figure and table examples to illustrate these features. Information on features not explicitly mentioned in the article can be viewed in the manuscript comments or more extensive online documentation. Authors are welcome to replace the text, tables, figures, and bibliography with their own and submit the resulting manuscript to the AAS Journals peer review system. The first lesson in the tutorial is to remind authors that the AAS Journals, the Astrophysical Journal (ApJ), the Astrophysical Journal Letters (ApJL), the Astronomical Journal (AJ), and the Planetary Science Journal (PSJ) all have a 250 word limit for the abstract⁽¹⁾. If you exceed this length the Editorial office will ask you to shorten it. This abstract has 161 words.

Keywords: Classical Nova (251) — Ultraviolet astronomy(1736) — History of astronomy(1808) — Interdisciplinary astronomy(804)

1. INTRODUCTION

L^AT_EX¹ is a document markup language that is particularly well suited for the publication of mathematical and scientific articles (Lamport 1994). L^AT_EX was written in 1985 by Leslie Lamport who based it on the T_EX typesetting language which itself was created by Donald E. Knuth in 1978. In 1988 a suite of L^AT_EX macros were developed to investigate electronic submission and publication of AAS Journal articles (Hansch & Biemesderfer 1989). Shortly afterwards, Chris Biemesderfer merged these macros and more into a L^AT_EX 2.08 style file called AAS_{TeX}. These early AAS_{TeX} versions introduced many common commands and practices that authors take for granted today. Substantial revisions were made by Lee Bratzman and Pierre Laundau when the package was updated to v4.0. AAS_{TeX} v5.0, written in 1995 by Arthur Ogawa, upgraded to L^AT_EX 2_ε which uses the document class in lieu of a style file. Other improvements to version 5 included hypertext support, landscape delimiters and improved figure support to facilitate electronic submission. AAS_{TeX} v5.2 was released in 2005 and introduced additional graphics support plus new markup to identify astronomical objects, datasets and facilities.

In 1996 Maxim Markevitch modified the AAS preprint style file, aasppr.sty, to closely emulate the very tight, two-column style of a typeset Astrophysical Journal article. The result was aashtmlpp.sty. A year later Alamy Vichitkun

Thesis

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Author Luca Martinelli
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Author Zain Chen

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Beijing Normal University
No.19, Xijiekouwai Street,
Haidian District,
Beijing, China, 100875
Phone: 86-xxxx-xxxxxxx
E-mail: xxx@bnu.edu.cn
URL: http://homepage.hit.edu.cn/XXX

November 22, 2022

Some University
Some Address
SomeTown, SomeState SomeZip

Dear Application Committee,

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbitrisque senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultrices et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Presentations

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Abstract This is a template for CERN Accelerator and Technology Sector (ATS) notes.

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Preliminary draft 17:07 28 March 2018

28 March 2018
author.email@cern.ch

CERN ATS Note title

Author Name
CERN, CH-1211 Geneva, Switzerland

Keywords: Bending Magnet, path length, pole face angle, beam trajectory, survey, GEODE

Summary

This document shows how to calculate the path-length of rectangular bending magnets in a beam line. The path-length depends on the pole-face angles, i.e. how the magnet is positioned in the line. The majority of bending magnets are installed with identical pole-face angles at the start and the end, but in certain cases the pole-face angles are different e.g. in the CERN PS BOOSTER BTP and BTY extraction lines, the BHZ10 magnet have a special positioning in order not to perturb the optics of any of the lines unfavorably. The path-length correspond to the s-parameter in MADX, and must be calculated precisely, in order to get a correct survey, which need to be correct to the 10 micron level.

Contents

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2 How to position a straight vacuum chamber to maximize aperture for the beam	4
3 Three layouts for a rectangular magnet	5
3.1 The standard magnet layout	5
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Book Covers

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Author Tibor Tómacs

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**Clio
ESKER GABBRO**
(they/them)

📅 31/01/1970 (Earth, Solar System)
🌌 Mars, Solar System
✉ ceskergabbro@globemail.com
🌐 ceskergabbro.com
🌐 www.linkedin.com/in/ceskergabbro
🐙 github.com/ceskergabbro

My name is Clio Esker Gabbro. I am a **space explorer** with experience on Mars. My current ambition is to conduct further research on **awareness during time loops**. Very importantly, I **do not lie** on résumés. In my free time, I enjoy formulating **jokes and puns** and roasting **vegan marshmallows**.

EDUCATION

PhD Irrelevant Science of Jokes
Perfected the fine art of species-inclusive interplanetary entertainment, a.k.a. PC jokes
Institute of PlutoTech (remote) 📍
2013 – 2017 📅

MSc Cheap Space Entertainment
Learned how to make low-quality space movies, and how to sell them as refined content
Lunar University of Technology 📍
2010 – 2012 📅

SELECTED PUBLICATIONS

Looking for Water on Mars
C. Esker Gabbro et al. 📍
Journal of ambitious hobby projects (2012) 📅
DOI: 12.3456/1234567.1234567 📄

Life on Mars: All You Need Is a Twix

WORK EXPERIENCE

Mars explorer
Mostly playing with Mars rovers to search for the remains of an ancient society
📍 Mars (Solar System)
📅 November 2017 – present

Personal portable heater
Hired on demand by those who happened to feel cold during the day and could use a hug too
📍 All over Earth
📅 June 2008 – March 2010

SKILLS & LANGUAGES

Computer
●●● Python++ ●●○ DeRuSt
●●○ JavaSharp ●○○ Macrohard

Other tools
📍 Mars rover 📍 Asteroid gazer 📍 Brain



"Is it better to be feared or respected?" I say, is it too much to ask for both?
I prefer the weapon you only have to fire once.
For your consideration... **LaTeX**.