

如何使用 L^AT_EX 排版论文



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1 简介

TeX 与 LaTeX
安装

2 学术论文排版

论文模板使用
LaTeX 排版入门

3 学位论文排版

ThuThesis 清华大学学位论文模板

4 总结



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4 总结



- T_EX: τɛχ (/ˈtɒx/, /ˈtɒk/)
 - ▶ 生成精美图书的排版系统
 - ▶ 最初由高德纳 (Donald E. Knuth) 于 1978 年开发
 - ▶ 发音接近“泰赫”，而非“泰克斯”，Knuth 对此有强迫症^{qiǎng}
 - ▶ 最新版本为 T_EX 3.14159265
 - ▶ 漂亮、美观、稳定、通用
 - ▶ 尤其擅长数学公式排版
- L^AT_EX (/ˈlɑtɒx/, /ˈleɪtɒk/)
 - ▶ Leslie Lamport 开发
 - ▶ 在 T_EX 的基础上的宏包，降低使用门槛
 - ▶ 极其丰富的宏包，提供扩展功能
 - ▶ 广泛用于学术界，期刊会议论文模板
 - ▶ 大学学位论文模板，如 ThuThesis



和 Word 对比

Microsoft® Word	L ^A T _E X
字处理工具	专业排版软件
容易上手,简单直观	容易上手
所见即所得	所见即所想,所想即所得
高级功能不易掌握	进阶难,但一般用不到
处理长文档需要丰富经验	和短文档处理基本无异
花费大量时间调格式	无需担心格式,专心作者内容
公式排版差强人意	尤其擅长公式排版
二进制格式,兼容性差	文本文件,易读、稳定
付费商业许可	自由免费使用



无编号公式

$$\mathcal{F}(\xi) = \int_{-\infty}^{\infty} f(x)e^{-j2\pi\xi x} dx$$

多行多列公式

$$y = d \qquad z = 1 \qquad (1)$$

$$y = cx + d \qquad z = x + 1 \qquad (2)$$

$$y_{12} = bx^2 + cx + d \qquad z = x^2 + x + 1$$

$$y(x) = ax^3 + bx^2 + cx + d \qquad z = x^3 + x^2 + x + 1$$

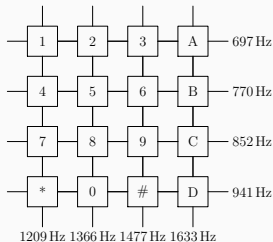
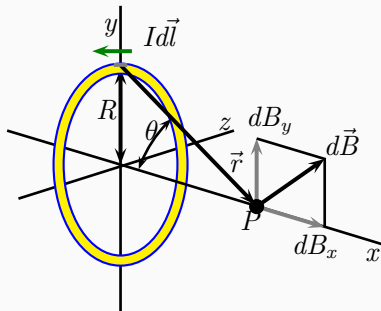
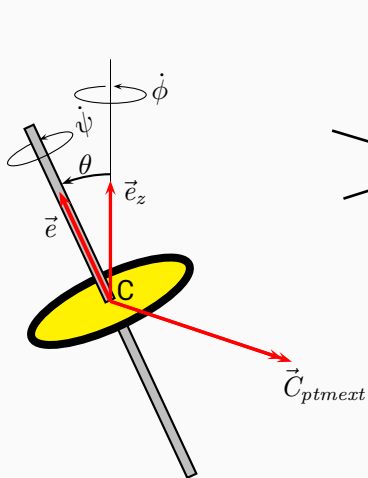


编号多行公式

$$\begin{aligned} A &= \lim_{n \rightarrow \infty} \Delta x \left(a^2 + \left(a^2 + 2a\Delta x + (\Delta x)^2 \right) \right. \\ &\quad + \left(a^2 + 2 \cdot 2a\Delta x + 2^2 (\Delta x)^2 \right) \\ &\quad + \left(a^2 + 2 \cdot 3a\Delta x + 3^2 (\Delta x)^2 \right) \\ &\quad + \dots \\ &\quad \left. + \left(a^2 + 2 \cdot (n-1)a\Delta x + (n-1)^2 (\Delta x)^2 \right) \right) \\ &= \frac{1}{3} (b^3 - a^3) \end{aligned}$$



T_EX 排版举例：图形



potential to have content sources on servers (and server networks) in the vicinity of a mobile user add services to the mobile user, to support content-aware applications. However, challenges are present in order to “efficiently” on-demand from clouds of services and resources efficiently, seamlessly and in a robust manner.

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[89] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

[90] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

[91] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

[92] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

[93] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

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[95] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

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[97] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

[98] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

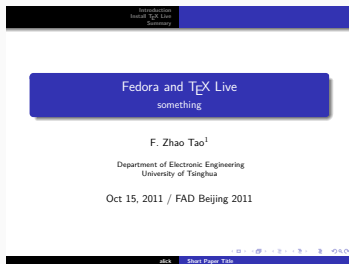
[99] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

[100] J. Debnath, S. Suresh, C. Wang, C. Goh, P. Senozon, J. Wang, R. Rajwade, J. Van Meulen, S. Venugopal, An open platform for cloud-based services, in: Proceedings of the 10th International Conference on Mobile Computing and Communications, PerCom, 2010, pp. 100–105.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zril delectat augue duis dolore t feugiat nulla facilisi. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.



T_EX 排版举例:幻灯片



1 简介

$\text{T}_\text{E}\text{X}$ 与 $\text{L}_\text{A}\text{T}_\text{E}\text{X}$
安装

2 学术论文排版

论文模板使用
 $\text{L}_\text{A}\text{T}_\text{E}\text{X}$ 排版入门

3 学位论文排版

ThuThesis 清华大学学位论文模板

4 总结



如何安装 \LaTeX ?

- \TeX 发行版 (Distro)
 - ▶ \TeX 实用工具大集合:引擎、宏包、文档等
 - ▶ 常见 \TeX 发行版: \TeX Live , $\text{CT}\text{\TeX}$, $\text{MiK}\text{\TeX}$, $\text{Mac}\text{\TeX}$
- \TeX Live
 - ▶ 跨平台: Windows, Linux, Mac OS X ($\text{Mac}\text{\TeX}$)
 - ▶ 每年一个新版本发布, 当前 \TeX Live 2015
- $\text{CT}\text{\TeX}$
 - ▶ 中科院吴凌云研究员基于 $\text{MiK}\text{\TeX}$ 开发
 - ▶ 极大的方便了中文 \TeX 用户
 - ▶ 2012 年之后疏于维护, 长久不更新
 - ▶ 2016 年由 Harry Chen 和 Liam Huang 接手继续开发
 - ▶ 多次跳票, 尚未发布正式版



- 从 CTAN 镜像下载安装包 (.exe 或.zip 或.tar.gz 格式) (和相应的校验文件,以.sha256 结尾)

- ▶ 清华镜像

`https://mirrors.tuna.tsinghua.edu.cn/CTAN/systems/texlive/tlnet/`

- ▶ 更多可见 `http://mirror.ctan.org/README.mirrors`

- 可选步骤:校验安装包

```
LANG=C sha256sum --check install-tl-unx.tar.gz.sha256  
install-tl-unx.tar.gz: OK
```



- Windows

- ▶ 双击下载的安装程序
- ▶ 切换默认仓库为国内镜像:加速网络下载

- Mac OS X

- ▶ <https://mirrors.tuna.tsinghua.edu.cn/CTAN/systems/mac/mactex/MacTeX.pkg>

- Linux

- ▶ 图形安装界面需要 Perl Tk 模块:

```
yum install perl-Tk 或 apt-get install perl-tk  
sudo mkdir /usr/local/texlive  
sudo chown yourname:yourname /usr/local/texlive  
./install-tl -gui -repository \  
    http://mirrors.tuna.tsinghua.edu.cn/CTAN/systems/texlive/  
    tlnet/
```

- 截图...





TeX Live 2015

TeX Live 2015 安装

1/5

Welcome to the installation of TeX Live 2015
<http://tug.org/texlive>

This wizard will guide you through the installation.

Best to disable your virus scanner during installation.

For an advanced, customizable installation, please consult
the web pages or installation guide.
Or use `install-tl-advanced.bat`.

Change default repository

退出

下一步 >



76 Install-tl



TeX Live 2015

TeX Live 2015 安装

1-1/5

Select repository:

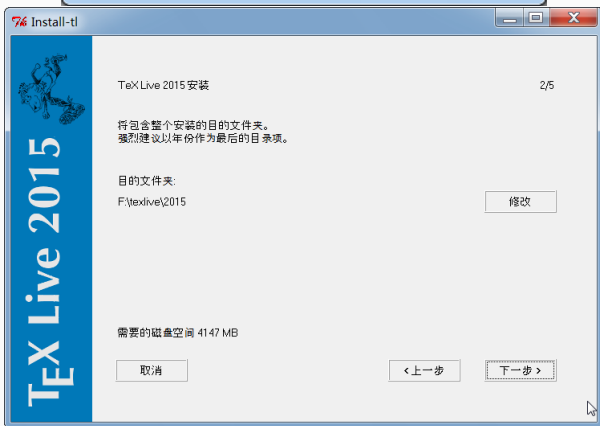
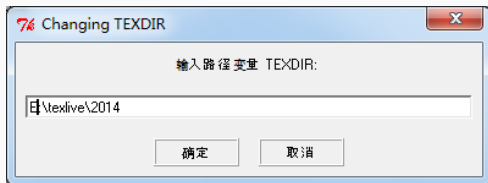
Mirror:

退出

< 上一步

下一步 >







TeX Live 2015

TeX Live 2015 安装

3/5

这个界面允许你配置某些选项

缺省的纸张给: A4 letter

Add menu shortcuts

安装 TeXworks 前端

为所有用户安装

取消

< 上一步

下一步 >





TeX Live 2015 安装

4/5

我们可以开始安装 TeX Live 2015 了。
将使用下列选项。
如果你还想修改什么请后退，否则点击“安装”按钮。

目的文件夹: F:\texlive\2015
缺省的纸张给: A4
Add menu shortcuts: 是
安装 TeXworks 前端: 是
为所有用户安装: 是





TeX Live 2015

TeX Live 2015 安装

5/5

```
Installing [0014/3126, time/total: 00:08/25:01]: Type1fonts  
[516k]  
Installing [0015/3126, time/total: 00:09/26:49]: a0poster [119k]  
Installing [0016/3126, time/total: 00:09/26:32]: a2ping [48k]  
Installing [0017/3126, time/total: 00:10/29:22]: a2ping.win32  
[1k]  
Installing [0018/3126, time/total: 00:10/29:22]: a4wide [133k]  
Installing [0019/3126, time/total: 00:10/29:01]: a5comb [91k]  
Installing [0020/3126, time/total: 00:11/31:40]: aastex [1292k]  
Installing [0021/3126, time/total: 00:11/28:26]: abbr [4k]  
Installing [0022/3126, time/total: 00:12/31:01]: abc [286k]  
Installing [0023/3126, time/total: 00:12/30:20]: abntex2 [4493k]  
Installing [0024/3126, time/total: 00:14/26:17]: abracas [197k]  
Installing [0025/3126, time/total: 00:14/25:59]: abstract [154k]  
Installing [0026/3126, time/total: 00:14/25:46]: abstyles [151k]
```

取消





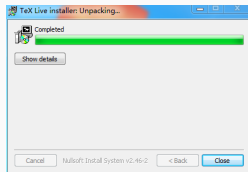
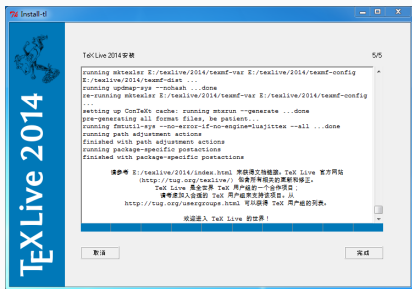
TeXLive 2014

TeX Live 2014 安装

5/5

```
writing fmtutil.cnf to E:/texlive/2014/texmf-var/web2c/fmtutil.cnf
writing updmap.cfg to E:/texlive/2014/texmf-dist/web2c/updmap.cfg
writing language.dat to
E:/texlive/2014/texmf-var/tex/generic/config/language.dat
writing language.def to
E:/texlive/2014/texmf-var/tex/generic/config/language.def
writing language.dat.lua to
E:/texlive/2014/texmf-var/tex/generic/config/language.dat.lua
running mktexlsr E:/texlive/2014/texmf-var E:/texlive/2014/texmf-config
E:/texlive/2014/texmf-dist ...
running updmap-sys --nohash ...done
re-running mktexlsr E:/texlive/2014/texmf-var E:/texlive/2014/texmf-config
...
setting up ConTeXt cache: running mtxrun --generate ...done
pre-generating all format files, be patient...
running fmtutil-sys --no-error-if-no-engine=luajitteX --all ...done
running path adjustment actions
finished with path adjustment actions
running package-specific postactions
```





Windows 上安装过程比较慢,尤其是最后的生成索引阶段,请耐心等待



网络安装后配置 (仅 Linux)

- 添加环境变量到 `~/.bash_profile` 文件:

```
export PATH=/usr/local/texlive/2015/bin/x86_64-linux:$PATH
export MANPATH=/usr/local/texlive/2015/texmf/doc/man:$MANPATH
export INFOPATH=/usr/local/texlive/2015/texmf/doc/info:$INFOPATH
```

- 打开 T_EX Live 指南中文版 “`texlive-zh-cn.pdf`”, 关注第 3.4 节

```
texdoc texlive-zh
```



网络安装后配置 (仅 Linux)

- X_YTeX 系统字体配置

```
cp /usr/local/texlive/2015/texmf-var/fonts/conf/texlive-  
fontconfig.conf \  
/etc/fonts/conf.d/09-texlive.conf  
fc-cache -fsv
```

- 让系统的包管理器知道 TeX Live 已经装过了, 所以安装一个 dummy package

- ▶ Arch Linux 用户装 AUR 里的 texlive-dummy

- ▶ Debian/Ubuntu 用户参照手册做一个包即可

<https://www.tug.org/texlive/debian.html#vanilla>

- ▶ Fedora 用户可以在

<https://copr.fedoraproject.org/coprs/fatka/texlive-dummy/>
下载

- 教程可参考: <http://zhuanlan.zhihu.com/LaTeX/20069414>



Windows 安装 C_TE_X 清华特别版

- C_TE_X 2.9.3 尚未发布,开发者为了这次讲座专门发了一个特别版
- 下载地址: <https://mirrors.tuna.tsinghua.edu.cn/ctex/>
- 傻瓜安装,一路 Next 即可
- 有一些小问题,安装到最后会报错,忽略即可
- 安装前会自动卸载旧版本 C_TE_X 2.9.2, 大约 3-5 分钟
- 总安装时间约 10-15 分钟
- 还有不少小问题需要解决



- TeX 编辑器
 - ▶ 专用编辑器: TeXworks、TeXstudio、TeXmaker、WinEdt 等
 - ▶ 通用编辑器 (加 LaTeX 插件): Vim、Emacs、Sublime、Atom 等

TeXStudio 配置

- Options -> Configure TeXstudio
 - ▶ Build: Default Compiler 选择 XeLaTeX
 - ▶ 搜索框输入 Line Number -> Adv. Editor -> 打开行号

WinEdt 配置

- Options -> Execution Modes
 - ▶ 如果没有 Adobe Reader 的话, 需要定义 pdf 阅读器
- 如果遇到中文不正常, 到 Options -> Preferences 换个字体
 - ▶ 推荐文泉驿等宽微米黑



很多时候需要自己安装宏包

- 发行版没有预装
- 宏包需要更新

T_EX Live

- 开始菜单里找 Tex Live Manage
- 使用 `tlmgr install <pkgname>` 命令

C_TE_X 或 MiK_TE_X

- 开始菜单里找 C_TE_X / MiK_TE_X -> Package Manager
- 在 WinEdt 里 MiK_Te_X Options -> Packages
- 清华宏包仓库被定位到美国去了,注意找一下



使用在线协作平台

- 通过在线平台编辑、编译
 - ▶ Overleaf, SharedLaTeX
- 免去安装/升级等一系列烦恼
- 可以多人协作
- 支持中文,但有时需要自己上传字体
 - ▶ Overleaf 可直接使用 ctex 宏包
- 容量有一定限制



网络安装后测试

- 编辑 `hello.tex` (Windows 下不要用中文文件名; 注意 \LaTeX 文档对大小写敏感。)

```
\documentclass{article}
\usepackage{ctex} % 加入中文支持
\begin{document}
\TeX{}你好！
\end{document}
```

- ▶ Windows 下缺省使用中易字体
- ▶ Linux、Mac OS X 下需要注意字体 (参见 `ctex` 文档)
- 使用 XeLaTeX 引擎编译, 得到 PDF 文档

\TeX 你好!



1 简介

TeX 与 LaTeX
安装

2 学术论文排版

论文模板使用
LaTeX 排版入门

3 学位论文排版

ThuThesis 清华大学学位论文模板

4 总结



模板是什么？

- 模板
 - ▶ 已经设计好的格式框架
 - ▶ 好的模板：使用户专注于内容
 - ▶ 不应将时间花费在调整框架上
- 再提 Office 和 Word
 - ▶ 很少有人会有意识地在 Word 中使用模板
 - ▶ 定义自己的标题？定义自己的列表？定义自己的段落样式？
 - ▶ 自动化，还是手工调？
 - ▶ 经常被折腾的精疲力竭
 - ▶ 学习 \LaTeX 能帮助自己更好科学地使用 word



- 获取模板
 - ▶ 随发行版自带、手动网络下载
 - ▶ 模板文档类 .cls 文件
 - ▶ 示例 .tex 文件
- 编辑 .tex 文件: 添加用户内容
- 编译: 生成 PDF 文档



IEEE 期刊论文

- 获取模板：已随发行版自带
 - ▶ 在安装目录
`<prefix>\texlive\2015\texmf-dist\doc\latex\IEEEtran` 下找到
`bare_jrnl.tex`
 - ▶ 复制到某个文件夹 (比如个人存论文的目录)
- 编辑 `bare_jrnl.tex` 文件 (英文模板：不支持中文)
- 编译
 - ▶ 英文文献：XeLaTeX、PDFLaTeX 编译均可



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4 总结



```
\documentclass[a4paper]{article}
% 文档类型，例如 article，[]内是选项，比如 a4
% paper 设置为 A4 纸
% 这里开始是导言区
\usepackage{graphicx} % 引用宏包
\graphicspath{{fig/}} % 设置
% 导言区到此为止
\begin{document}
这里开始是正文
\end{document}
```



- 简单命令

- ▶ `\命令` `{\songti 中国人民解放军}` ⇒ 中国人民解放军

- ▶ `\命令[可选参数]{必选参数}`

- `\section[精简标题]{这个题目实在太长了放到目录里面不太好看}`

- ⇒ 1.1 这个题目实在太长了放到目录里面不太好看

- 环境

```
\begin{equation*}
```

```
  a^2-b^2=(a+b)(a-b)
```

```
\end{equation*}
```

$$a^2 - b^2 = (a + b)(a - b)$$



命令

<code>\chapter</code> 章	<code>\section</code> 节	<code>\subsection</code> 小节	<code>\paragraph</code> 带题头段落
<code>\centering</code> 居中对齐	<code>\emph</code> 强调	<code>\verb</code> 原样输出	<code>\url</code> 超链接
<code>\footnote</code> 脚注	<code>\item</code> 列表条目	<code>\caption</code> 标题	<code>\includegraphics</code> 插入图片
<code>\label</code> 标号	<code>\cite</code> 引用参考文献	<code>\ref</code> 引用图表公式等	



环境

<code>table</code>	<code>figure</code>	<code>equation</code>
表格	图片	公式
<hr/>		
<code>itemize</code>	<code>enumerate</code>	<code>description</code>
无编号列表	编号列表	描述
<hr/>		



`\chapter{前言}`

⇒ 第 1 章 前言

`\section[精简标题]{这个题目实在太长了放到目录里面不太好看}`

⇒ 1.1 这个题目实在太长了放到目录里面不太好看

`\footnote{我是可爱的脚注}`

⇒ 前方高能¹

¹我是可爱的脚注



L^AT_EX 环境命令举例

```
\begin{itemize}
  \item 一条
  \item 次条
  \item 这一条可以分为
    ...
    \begin{itemize}
      \item 子一条
    \end{itemize}
\end{itemize}
```

- 一条
- 次条
- 这一条可以分为...
 - ▶ 子一条

```
\begin{enumerate}
  \item 一条
  \item 次条
  \item 再条
\end{enumerate}
```

- ① 一条
- ② 次条
- ③ 再条




```
$V = \frac{4}{3}\pi r^2$
```

$$V = \frac{4}{3}\pi r^2$$

```
$$V = \frac{4}{3}\pi r^2$$
```

$$V = \frac{4}{3}\pi r^2$$

```
\begin{equation}
```

```
\label{eq:vsphere}
```

```
V = \frac{4}{3}\pi r^2
```

```
\end{equation}
```

$$V = \frac{4}{3}\pi r^2 \quad (5)$$



- 数学公式排版是 L^AT_EX 的绝对强项
- 数学排版需要进入数学模式
 - ▶ 用单个美元符号 (\$) 包围起来的内容是**行内公式**
 - ▶ 用两个美元符号 (\$\$) 包围起来的是**单行公式**
 - ▶ 使用数学环境,例如 equation 环境内的公式会自动加上编号,align 环境用于多行公式 (例如方程组)
- 运行 `texdoc symbols` 查看符号表
- MathType 也可以使用和导出 L^AT_EX 公式



```
\tableofcontents % 这里是目录
\part{有监督学习}
\chapter{支持向量机}
\section{支持向量机简介}
\subsection{支持向量机的历史}
\subsubsection{支持向量机的诞生}
\paragraph{一些趣闻}
\subparagraph{第一个趣闻}
```

第一部分 有监督学习
第一章 支持向量机
1. 支持向量机简介
1.1 支持向量机的历史
1.1.1 支持向量机的诞生
一些趣闻
第一个趣闻



列表与枚举

```
\item \LaTeX{} 好处都有啥
  \begin{description}
    \item[好用] 体验好才是真的好
    \item[好看] 强迫症的福音
    \item[开源] 众人拾柴火焰高
  \end{description}
\item 还有呢?
  \begin{itemize}
    \item 好处 1
    \item 好处 2
  \end{itemize}
\end{enumerate}
```

① \LaTeX 好处都有啥

好用 体验好才是真的好

好看 治疗强迫症

开源 众人拾柴火焰高

② 还有呢?

▶ 好处 1

▶ 好处 2



交叉引用

- 给对象命名: 图片、表格、公式等

```
\label{name}
```

- 引用对象

```
\ref{name}
```

图书馆馆徽请参见图~\ref{fig:lib}。

```
\begin{figure}[htbp]
  \centering
  \includegraphics[height=.2\textheight]{libicon.pdf}
  \caption{图书馆馆徽。}
  \label{fig:lib}
\end{figure}
```

图书馆馆徽请参见

图 1。



图 1. 图书馆馆徽。



交叉引用

```
\begin{table}[htbp]
  \caption{编号与含义}
  \label{tab:number}
  \centering
  \begin{tabular}{cl}
    \toprule
    编号 & 含义 \\
    \midrule
    1 & 第一 \\
    2 & 第二 \\
    \bottomrule
  \end{tabular}
\end{table}
```

公式~(\ref{eq:vsphere}) 中编号与含义
请参见表~\ref{tab:number}。

表 1. 编号与含义

编号	含义
1	第一
2	第二

公式 (5) 编号与含义请参
见表 1。



- 初学者最“捉摸不透”的特性之一
- 图片和表格有时会很大,在插入的位置不一定放得下,因此需要浮动调整
- 避免在文中使用「下图」「上图」的说法,而是使用图表的编号,例如 `图~\ref{fig:fig1}`。
- `\begin{figure}[<位置>]` 图片 `\end{figure}`
 - ▶ 位置参数指定浮动体摆放的偏好
 - ▶ h 当前位置 (here), t 顶部 (top), b 底部 (bottom), p 单独成页 (p)



1 简介

TeX 与 LaTeX
安装

2 学术论文排版

论文模板使用
LaTeX 排版入门

3 学位论文排版

ThuThesis 清华大学学位论文模板

4 总结



- 最早：王磊 (2004.4)
- 2005 年：薛瑞尼
- 最新正式版：5.3.1 (2016-03-20)
- 最近更新：2016/03/25
- 全面支持本科、硕士、博士、博士后论文格式

清华大学

综合论文训练

题目：清华大学学位论文 L^AT_EX 模板
使用示例文档

系 别：计算机科学与技术系

专 业：计算机科学与技术

姓 名：薛瑞尼

指导教师：郑纬民教授

辅导教师：陈文光教授

2015 年 4 月 23 日

分类号
UDC

清华大学学位论文 L^AT_EX 模板

使用示例文档

(申请清华大学工学硕士学位论文)

培养单位：计算机科学与技术系

学 科：计算机科学与技术

研 究 生：薛瑞尼

指导教师：郑纬民教授

二〇一五年四月

地 址
电 话

清华大学学位论文 L^AT_EX 模板

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指导教师：郑纬民教授

副指导教师：陈文光教授

联合导师：某某某教授

二〇一五年四月



- T_EX Live 和 C_TE_X 清华特别版已经带了,一般不用特地装
- 也可以到 CTAN 自行下载
- 但是每年都会更新,有时需要装最新开发版……



安装 ThuThesis

- 下载最新开发版

- ▶ <https://github.com/xueruini/thuthesis>
- ▶ 右边栏 Download ZIP 按钮

- 下载最新正式版

- ▶ <http://mirrors.ctan.org/macros/latex/contrib/thuthesis.zip>

- 安装

- ▶ 解压缩看文档 README.md
- ▶ 模板文档类: XeLaTeX 编译一次 `thuthesis.ins` \Rightarrow `thuthesis.cls` 和 `thuthesis.cfg`
- ▶ 用户手册: XeLaTeX 编译两次 `thuthesis.dtx` \Rightarrow `thuthesis.pdf`
- ▶ 论文示例: 对 `main.tex` 执行一次 XeLaTeX, 一次 BibTeX, 再两次 XeLaTeX
- ▶ 可使用或参考附带的 Makefile

HTTPS clone URL

`https://github.com/xue`

You can clone with [HTTPS](#), [SSH](#),
or [Subversion](#). 

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bachelor 我要写本科论文

```
\documentclass[bachelor]{thuthesis}
```

master 我要写硕士论文

```
\documentclass[master]{thuthesis}
```

doctor 我要写博士论文

```
\documentclass[doctor]{thuthesis}
```

secret 论文有保密要求

```
\documentclass[doctor, secret]{thuthesis}
```

```
\secretlevel{机密}
```

```
\secretyear{2010}
```



命令作用	中文命令	英文命令
论文标题	<code>\ctitle</code>	<code>\etitle</code>
作者姓名	<code>\cauthor</code>	<code>\eauthor</code>
申请学位名称	<code>\cdegree</code>	<code>\edegree</code>
院系名称	<code>\cdepartment</code>	<code>\edepartment</code>
专业名称	<code>\cmajor</code>	<code>\emajor</code>
导师	<code>\csupervisor</code>	<code>\esupervisor</code>
副导师	<code>\cassosupervisor</code>	<code>\eassosupervisor</code>
联合导师	<code>\ccosupervisor</code>	<code>\ecosupervisor</code>
日期	<code>\cdate</code>	<code>\edate</code>
摘要	<code>\cabstract</code>	<code>\eabstract</code>
关键词	<code>\ckeywords</code>	<code>\ekeywords</code>



- 公式示例: `data/chap01.tex`
- ThuThesis 定义了常用的数学环境

axiom	theorem	definition	proposition	lemma
公理	定理	定义	命题	引理
proof	corollary	example	exercise	
证明	推论	例子	练习	



- 推荐 $\text{BIB}\text{T}\text{E}\text{X}$
 - ▶ 使用文献管理软件导出 bib 文件
 - Menderley, NoteExpress
 - ▶ 使用 bibtex 生成参考文献列表
 - ▶ bst 参考文献样式文件: thubib.bst
- 学校要求两种引用方式:
 - ▶ 上标模式: 如“在许多文献^[12,13] 中……”

```
\cite{key12, key13}
```

- ▶ 正文模式: 如“文献 [14] 证明了……”

```
\inlinecite{key14}
```



- 矢量图 eps, ps, pdf
 - ▶ METAPOST, pstricks, pgf ...
 - ▶ Xfig, Dia, **Visio**, **Inkscape** ...
 - ▶ Matlab / Excel 等保存为 pdf
- 标量图 png, jpg, tiff ...
 - ▶ 提高清晰度, 避免发虚
- 转化
 - ▶ 虚拟打印机
 - ▶ ImageMagick
 - ▶ epstopdf
 - ▶ pdfcrop

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulpate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugait nulla facilisi. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

♥

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- **编译不通过** 缺少必要宏包, 命令拼写错误, 括号未配对等
- **表格图片乱跑** \LaTeX 自身的浮动定位算法
- **段落间距变大** \LaTeX 排版算法
- **参考文献** 推荐使用 $\text{Bib}\TeX$, 也可以手写 `\bibitem`



- 包太雷《 \LaTeX Notes(第二版)》(3 小时)
- WikiBooks
 - ▶ <https://en.wikibooks.org/wiki/LaTeX>
 - ▶ <https://zh.wikibooks.org/wiki/LaTeX>
- 经典文档
 - ▶ 仔细阅读《一份不太简短的 $\text{\LaTeX} 2_{\epsilon}$ 介绍》(lshort-zh) (1-2 天)
 - ▶ 粗略阅读《 $\text{\LaTeX} 2_{\epsilon}$ 插图指南》(2-3 小时)
- 仔细阅读《ThuThesis 用户手册》(20 分钟)
- 从 ThuThesis 示例文档入手



- 常用文档
 - ▶ symbols: 符号大全
 - ▶ Mathmode: 数学参考
 - ▶ ctex, xeCJK: 中文支持
 - ▶ texlive-zh: T_EX Live 安装与使用
 - ▶ 所用宏包文档
- 工具
 - ▶ tlmgr: T_EX Live 管理器
 - ▶ texdoc: T_EX 文档查看器
例如: `texdoc lshort-zh`
 - ▶ <http://texdoc.net/>
 - ▶ TeX Studio 和 WinEdt 都支持在帮助里看文档



一点人生的经验

- 所有的文档都是过时的
- 网上的中文文档尤其过时
- 湿兄用 U 盘拷给你的的 ctex 套装一定是过时的, ThuThesis 八成是老版本的
- 如果你要处理中文
 - ▶ 使用 XeLaTeX, 使用 XeLaTeX, 使用 XeLaTeX
 - ▶ 忘记 CJK, 忘记 CJK, 忘记 CJK
 - ▶ 使用 xeCJK
 - ▶ 使用 ctex 宏包 (2.0 以上版本) (跟 CT_EX 套装仅仅是名字像)
- 写一点, 编译一次, 减小排错搜索空间



求助

- BBS
 - ▶ 水木社区 TeX 版
 - ▶ bbs.ctex.org
- UK FAQ
- TeX StackExchange
- Google
 - ▶ 使用英语搜索



- GitHub Issues 提问
- T_EX@newsimth 查找或发文
- ThuThesis Google Group 发问



- 错误反馈: GitHub Issues
- 改进建议: GitHub Issues
- 出力维护: LaTeX 宏包编写、Git
- 科普、答疑

图书馆讲座征主讲人!



- 错误反馈: GitHub Issues
- 改进建议: GitHub Issues
- 出力维护: LaTeX 宏包编写、Git
- 科普、答疑 **图书馆讲座征主讲人!**






- 本幻灯片

- ▶ <https://github.com/tuna/thulib-latex-talk>
- ▶ <https://www.overleaf.com/read/bdynvrzpqmwq>
- ▶ Overleaf 版本有只包含第一章

- 本幻灯片基于：

- ▶ <http://github.com/alick/fad-texlive-talk>
- ▶ ThuThesis 使用向导 v3.0

- 许可证：CC BY-SA 4.0 Unported   



- \LaTeX Tips: <https://alick.fedorapeople.org/fudcon-apac-2014/latex-tips.pdf>
(例如: \LaTeX 中引号的正确输入姿势)
- Linux 用户: <https://github.com/alick/fad-texlive-talk>
- 网站推荐: <http://www.latexstudio.net/>
- 知乎专栏: <http://zhuanlan.zhihu.com/LaTeX>
- ThuThesis 使用向导 v3.0 (薛瑞尼)
- \LaTeX 杂谈 (刘海洋)
- 《 \LaTeX 入门》(刘海洋)



Thank you!

