

SJTUT_EX: 上海交通大学文档类集

SJTUG

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简介

此宏包旨在建立一个简单易用的上海交通大学文档类集, 包括学位论文文档类 `sjuthesis` 以及普通文档类 `sjtuarticle` 和 `sjtureport`。

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第 1 节 介绍

最早的一版 L^AT_EX 学位论文模板由一位热心的物理系同学制作, 中文字符处理采用了当时最为流行的 CJK-L^AT_EX 方案。在此基础上, weijianwen 根据交大研究生院对学位论文的要求, 完成了一份基本可用的交大 L^AT_EX 学位论文模板。由于 CJK-L^AT_EX 方案不易使用, weijianwen 与 William Wang 开始着手把模板向 X_YL^AT_EX 引擎移植。之后 weijianwen 又断断续续做了一些完善模板的工作, 在原有硕士学位论文模板的基础上完成了交大学士和博士学位论文模板。

*sjtut_Ex rev. 78f11bc.

2012 年 5 月模板开始在 GitHub¹上管理和更新, 2018 年 1 月项目转移至 SJTUG 名下。2019 年 6 月 Alexara Wu 重构了整个宏包的代码, 并使用 DocTeX 文档和 DocSTRIP 工具进行代码的管理, 升级版本号为 1.0。2022 年 11 月, 论文模板改版后, 使用 L^AT_EX3 重构了代码, 添加 sjturement 和 sjtuarticle 文档类, 升级版本号为 2.0。

现在, SJTUT_EX 代码在 GitHub²上维护。原 SJTUThesis 仓库则作为学位论文示例文档, 提供开箱即用的模板。学位论文模板用户可以在 Discussions 上提问使用问题, 也可以在 Issues 中进行 Bug 反馈与新功能提案。如果需要对文档类代码进行修改, 欢迎前往 SJTUT_EX 仓库进行 Pull Request。SJTUT_EX 模板的许多实现细节离不开 **热心同学们** 的贡献, 在此感谢所有为模板贡献过代码的同学们, 以及所有测试和使用模板的各位同学!

说明: 模板的作用在于减少论文写作过程中格式调整的时间, 前提是遵守模板的用法, 否则即使用了 SJTUT_EX 也难以保证输出的论文符合学校规范。

第 2 节 简明教程

2.1 安装 T_EX 发行版

因为 L^AT_EX3 和相关宏包在不断更新, 所以推荐使用最新的 T_EX 发行版。SJTUT_EX 支持主流的 T_EX 发行版, 包括 T_EX Live、MiK_TE_X、MacT_EX, 但不支持 C_TE_X 套装。安装方法具体可以参考 Wiki 页面《T_EX 发行版及其安装》。

SJTUT_EX 最低支持至 2021 年发行的 T_EX 发行版, ctex 宏包版本应当在 v2.5 及以上。版本过低将无法正常编译。

2.2 文件组成

表 1 列出了 SJTUT_EX 的主要文件及其功能介绍。

表 1 模板的文件组成

类别	文件	说明
文档类	sjtuthesis.cls	学位论文文档类
	sjturement.cls	报告文档类
	sjtuarticle.cls	文稿文档类
	sjtu-name-*.def	文档类名称配置
	sjtu-lang-*.def	文档类语言配置
	sjtu-scheme-*.def	文档类语言方案
字体配置文件	sjtu-text-font-*.def	西文字体配置
	sjtu-math-font-*.def	数学字体配置
	sjtu-cjk-font-*.def	CJK 字体配置
视觉形象系统 ^a	sjtu-vi-logo-*.pdf	校标图片
	sjtu-vi-badge-*.pdf	校徽图片
	sjtu-vi-name-*.pdf	校名图片

^a 交大视觉形象系统的相关图像资源版权归上海交通大学所有。

¹<https://github.com/weijianwen/SJTUThesis>, 项目转移后该链接已重定向。

²<https://github.com/sjtug/SJTUTeX>

2.3 使用文档类

共有 3 种文档类, `sjtuthesis` 用于学位论文的排版, `sjtreport` 用于课程大报告的排版, `sjtarticle` 用于课程小论文的排版。

将文档保存在下载好的 SJTUT_EX 模板根目录下, 文件以 `.tex` 后缀结尾。注意在使用文档类时, 需要将涉及到的所有源文件使用 UTF-8 编码保存。对于不同的文档类, 使用方法略有不同, 这里给出这三种文档类的最小使用示例。

下面这份 T_EX 文档展示了 `sjtuthesis` 文档类的基本用法, 一般需要指定中英文名称。该文档将包含中英文封面, 页眉为文档主题及章节名称。

```
\documentclass[type=master]{sjtuthesis}
\sjtsetup{
  info = {
    zh/title = {上海交通大学学位论文模板示例文档},
    en/title = {A Sample Document for SJTU Thesis Template},
    zh/author = {某某},
    en/author = {Mo Mo},
  }
}
\begin{document}
  \maketitle
  \frontmatter
  \tableofcontents*
  \mainmatter
  \chapter{欢迎}
  \section{欢迎使用 SJTUThesis}
  你好, \LaTeX{}!
\end{document}
```

下面这份 T_EX 文档展示了 `sjtreport` 文档类的基本用法, 建议使用标准命令定义中文名称。该文档将包含标题页, 页眉为校标图片、文档主题及章节名称。

```
\documentclass{sjtreport}
\title{上海交通大学报告模板示例文档}
\author{某某}
\subject{XX期末课程论文}
\keywords{上海交大, 饮水思源, 爱国荣校}
\begin{document}
  \maketitle
  \chapter{欢迎}
  \section{欢迎使用 SJTUReport}
  你好, \LaTeX{}!
\end{document}
```

下面这份 T_EX 文档展示了 `sjtarticle` 文档类的基本用法, 建议使用标准命令定义中文名称, 不能够使用 `\chapter` 这一级。该文档包含标题栏, 页眉为校标图片、文档主题及章节名称。

```
\documentclass{sjtarticle}
\title{示例文档}
\author{某某}
\begin{document}
  \maketitle
  \section{欢迎使用 SJTUArticle}
  你好, \LaTeX{}!
\end{document}
```

2.4 编译文档

文档类推荐使用 XeLaTeX 或 LuaLaTeX 编译,同时也支持 pdfTeX 引擎。为了生成正确的目录、脚注以及交叉引用,至少需要连续编译两次。

在实际使用中,一般推荐使用自动生成工具 `latexmk` 编译文档。`latexmk` 命令可以自动进行多步编译,直到交叉引用都被解决。假设您的 $\text{T}_{\text{E}}\text{X}$ 源文件名为 `main.tex`,可在命令行中执行如下命令使用 XeLaTeX 编译文档

```
latexmk -xelatex main
```

也可通过修改 `latexmkrc` 配置文件来控制 `latexmk` 的行为,具体可以参考 `latexmk` 文档。

第 3 节 文档配置

本模板中的选项、命令或环境可以分为以下三类:

- 名字后面带有 \star 的,表示只能在 `sjtuthesis` 文档类中使用;
- 名字后面带有 \ast 的,表示只能在 `sjturement` 和 `sjtuarticle` 文档类中使用;
- 名字后面不带有特殊符号的,一般表示在 `sjtuthesis`、`sjturement` 和 `sjtuarticle` 文档类中都可以使用,特殊情况另作说明。

3.1 文档类选项

本节所指“文档类选项”是指需要在引入文档类的时候指定的选项:

```
\documentclass[<文档类选项>]{sjtuthesis}
```

部分选项采用 `<key>=<value>` 的形式,需要使用逗号分隔各选项。当 `<value>` 省略时,将采用默认值。在下文的说明中,将用**粗体**表示默认值。

3.1.1 通用选项

`type` \star `type = <bachelor|master|doctor>`

Updated: 2022-12-03 论文类型。三种选项分别代表学士学位论文、硕士学位论文、博士学位论文。

`lang` `lang = <zh|en|de|ja>`

Updated: 2023-03-23 论文主要语言。可选中文、英文、德文或日文,该选项会改变文档中的一些标题的名字。下文中 `<lang>` 可以指定为这些选项中的其中之一。

`draft` 是否开启草稿模式。`draft` 开启草稿模式,所有的图片将不会被加载,超过边界的区域将会被涂上黑色色块。`final` 关闭草稿模式。默认为 `final`。

`review` \star 盲审模式。开启盲审模式将隐去作者姓名、导师姓名、班级、学号等个人信息,删去版权使用授权书、原创性声明和致谢页。默认关闭。

3.1.2 页面设置

`oneside` 指明论文的单双面模式。`oneside` 为单面模式,`twoside` 为双面模式。

- `twoside`
- 在 `sjtuthesis` 文档类中,默认为 `twoside`。
 - 在 `sjturement` 和 `sjtuarticle` 文档类中,默认为 `oneside`。

`openright` 指明论文是否奇数页开章。`openright` 为从奇数页开始新章,`openany` 为从任意页开始新章。

- `openany`
- 在 `sjtuthesis` 文档类中,默认为 `openright`。
 - 在 `sjturement` 文档类中,默认为 `openany`。
 - 在 `sjtuarticle` 文档类中,该选项不可用。

<code>titlepage</code>	★ 指明论文的标题形式。 <code>titlepage</code> 为使用标题页。 <code>notitlepage</code> 为使用标题块。
<code>notitlepage</code>	★
New: 2022-12-23	

- 在 `sjtuthesis` 文档类中, 该选项不可用, 只能使用标题页。
- 在 `sjturement` 文档类中, 默认为 `titlepage`。
- 在 `sjtuarticle` 文档类中, 默认为 `notitlepage`。

3.1.3 字体选项

<code>zihao</code>	<code>zihao = <-4 5></code>
Updated: 2022-12-18	

论文默认字号, 可以设定为小四号或五号。

- 在 `sjtuthesis` 和 `sjturement` 文档类中默认为小四号;
- 在 `sjtuarticle` 文档类中默认为五号。

<code>linespread</code>	<code>linespread = <数值></code>
New: 2023-10-24	

设置行距倍数。

- 在 `sjtuthesis` 文档类中默认不调整行距倍数;
- 在 `sjtuarticle` 和 `sjturement` 文档类中默认为 1.3。

<code>baselineskip</code>	<code>baselineskip = <长度 false></code>
New: 2023-10-24	

正文基线间距。

- 在 `sjtuthesis` 文档类中, 默认为 20 磅。
- 在 `sjturement` 和 `sjtuarticle` 文档类中, 默认为 `false`; 此时正文基线间距为字号的 1.2 倍。

<code>cjk-font</code>	<code>cjk-font = <auto fandol windows mac ubuntu adobe founder none></code>
-----------------------	---

指定 CJK 字体集。SJTUT_EX 预定义了一些 CJK 字体组合, 具体配置见表 2。默认情况下会根据操作系统自动配置: Windows 系统默认使用 `windows`, macOS 系统默认使用 `mac`, Linux 系统默认使用 `fandol`。找不到对应定义的 CJK 字体集时的回退选项为 `fandol`。

仅 `windows` 和 `founder` 字体集支持 pdf_LA_TE_X 直接生成 PDF。其他 CJK 字体集使用 pdf_TE_X 引擎需要先通过 _LA_TE_X 生成 DVI, 然后再使用 DVIPDFM_x 转换为 PDF。

表 2 CJK 字体配置

	宋体	黑体	仿宋	楷体	明朝体 ^c	哥特体 ^c
<code>fandol</code> ^a	Fandol 宋体	Fandol 黑体	Fandol 仿宋	Fandol 楷体	HaranoAjiMincho	HaranoAjiGothic
<code>windows</code>	(中易)宋体	(中易)黑体	(中易)仿宋	(中易)楷体	MS Mincho	MS Gothic
<code>mac</code>	(华文)宋体-简	(华文)黑体-简	华文仿宋	(华文)楷体-简	Hiragino Mincho ProN	Hiragino Kaku Gothic ProN
<code>ubuntu</code>	Noto Serif CJK SC	Noto Sans CJK SC	—	文鼎 PL 简中楷	Noto Serif CJK JP	Noto Sans CJK JP
<code>adobe</code>	Adobe 宋体	Adobe 黑体	Adobe 仿宋	Adobe 楷体	Kozuka Mincho Pr6N	Kozuka Gothic Pr6N
<code>founder</code> ^b	方正书宋	方正黑体	方正仿宋	方正楷体	IPAMincho	IPAGothic

^a 发行版中自带的 Fandol 中文字库容易出现缺字的情况; 我们建议 Linux 用户使用 `ubuntu` 选项或自行配置合适的字体; 参见 [Wiki 页面《在线使用说明》](#)。

^b 配置 `founder` 选项使用方正简繁扩展版(即 GBK 版)字体。

^c 日文模板才需要日文明朝体与哥特体; 日文字体使用 `fontspec` 宏包设置, 故日文模板不支持 pdf_TE_X 引擎, 请使用 _X_L_A_TE_X 或 Lua_L_A_TE_X 编译。

<code>text-font</code>	<code>text-font = <newtx times stixtwo xits newpx cambria newcm lm libertinus none></code>
------------------------	--

指定西文字体集。SJTUT_EX 预定义了一些西文字体组合, 具体配置见表 3。找不到定义的西文字体集时的回退选项为 `newtx`。

<code>math-font</code>	<code>math-font = <auto newtx times stixtwo xits newpx cambria newcm lm libertinus none></code>
------------------------	---

指定数学字体集。SJTUT_EX 预定义了一些数学字体组合, 具体配置见表 3 数学字体列。默认跟随西文字体 `text-font` 的设置。找不到定义的数学字体集时的回退选项为 `newtx`。

`xits`, `newcm`, `cambria` 选项仅支持 _X_L_A_TE_X/Lua_L_A_TE_X 编译。

表 3 西文字体与数学字体配置

	正文字体	无衬线字体	等宽字体	数学字体
<code>newtx</code>	TG Termes X ^a	TG Heros	TG Cursor	<code>newtx</code>
<code>times</code>	Times New Roman ^b	Arial	Courier New	<code>mathptmx</code>
	Times ^c	Helvetica	Courier	
<code>stixtwo</code>	STIX Two Text	TG Heros	TG Cursor	STIX Two Math
<code>xits</code>	XITS	TG Heros	TG Cursor	XITS Math
<code>newpx</code>	TG Pagella X	TG Heros	TG Cursor	<code>newpx</code>
<code> Cambria</code>	Cambria	Calibri	Consolas	Cambria Math
<code>newcm</code>	New CM ^d	New CM Sans	New CM Mono	New CM Math
<code>lm</code>	LM Roman ^e	LM Sans	LM Mono	LM Math
<code>libertinus</code>	Libertinus Serif	Libertinus Sans	LM Mono	Libertinus Math

a “TG”是 TeX Gyre 的缩写。

b 本行中, Times New Roman、Arial 和 Courier New 是商业字体, 在 Windows 和 macOS 系统上均默认安装。

c 使用 pdf \TeX 引擎时, 实际使用对应字体的 Type 1 开源版本。

d “CM”是 Computer Modern 的缩写。

e “LM”是 Latin Modern 的缩写。

`math-style` `math-style = <ISO|TeX>`

New: 2022-12-03
Updated: 2023-01-05

数学符号样式。该选项将影响 `uppercase-greek`、`integral`、`integral-limits` 选项。默认遵循 ISO 80000-2 标准设置, 即斜体的大写希腊字母、直立的积分号以及积分号上下限置于上下方。用户也可以逐项修改数学样式。

`uppercase-greek` `uppercase-greek = <slanted|upright>`

New: 2023-01-05

大写希腊字母的正/斜体。

`integral` `integral = <slanted|upright>`

New: 2023-01-05

积分号的正/斜体。

`integral-limits` `integral-limits = <true|false>`

New: 2023-01-05

行间公式中积分号上下限的位置, `true` 使得上下限在积分号上下方, `false` 使得上下限在积分号右侧。该选项只影响行间公式, 行内公式统一居右侧, 不受影响。

3.2 论文信息设置

`\sjtusetup` `\sjtusetup{(键值列表)}`

本模板提供了一系列选项, 可由您自行配置。载入文档类之后, 以下所有选项均可通过统一的命令 `\sjtusetup` 来设置。

`\sjtusetup` 的参数是一组由 (英文) 逗号隔开的选项列表, 列表中的选项通常是 `<key>=<value>` 的形式。对于同一项, 后面的设置将会覆盖前面的设置。在下文的说明中, 将用**粗体**表示默认值。`\sjtusetup` 支持不同类型以及多种层次的选项设定。键值列表中, “=”左右的空格不影响设置; 但需注意, 参数列表中不可以出现空行。

```
\sjtusetup{
  info = {
    zh/title      = {上海交通大学学位论文模板示例文档},
    en/title      = {A Sample Document for SJTU Thesis Template},
    zh/author     = {某某},
    en/author     = {Mo Mo},
  },
  style = {
    float-num-sep = {-},
  }
}
```

```

    },
    name = {
      achv           = {攻读学位期间完成的论文},
    },
  },
}

```

3.2.1 信息域

`info` `info` = {<键值列表>}

Updated: 2023-03-14 该选项包含许多子项目,用于录入论文信息。具体内容见下。

- 在 `sjtuthesis` 文档类中,推荐使用带语言代码前缀 (`lang`) (比如 `zh` 或 `en`) 的键来设定对应语言的论文信息,见第 3.2.1.1 节;省略语言前缀不带“*”的项目表示对应的中文字段、带“*”的项目表示对应的英文字段属于老用法,仍然兼容但请及时更新至新用法。
- 在 `sjtureport` 和 `sjtuarticle` 文档类中,不需要使用语言代码前缀。此时推荐直接使用标准接口来设定这些信息,这些标准接口不属于键值列表,应当直接写在导言区内,见第 3.2.1.2 节。

3.2.1.1 适用于 `sjtuthesis` 文档类的键

`info/<lang>/title` ☆ `<lang>/title` = {<标题>}

Updated: 2023-03-14 标题。

`info/<lang>/display-title` ☆ `<lang>/display-title` = {<标题页标题>}

Updated: 2023-03-14

标题页中的题目。默认为跟随对应语言的标题。如果标题过长,可以尝试使用“\”手动断行。

`info/<lang>/subject` ☆ `<lang>/subject` = {<主题>}

New: 2022-12-17

Updated: 2023-03-14

文档主题。一般显示在中文标题页校徽下方。默认值类似于“上海交通大学学士学位论文”或“A Dissertation Submitted to Shanghai Jiao Tong University for the Degree of Bachelor”。

`info/<lang>/keywords` ☆ `<lang>/keywords` = {<中文关键字>}

Updated: 2023-03-14

关键字列表。各关键字之间需使用英文逗号隔开。为防止歧义,可以用分组括号“{...}”把各字段括起来。

`info/<lang>/author` ☆ `<lang>/author` = {<姓名>}

Updated: 2023-03-14

作者姓名。

`info/id` ☆ `id` = {<学号>}

学号。该键不需要语言前缀。

`info/<lang>/supervisor` ☆ `<lang>/supervisor` = {<导师姓名>}

`info/<lang>/assoc-supervisor` ☆ `<lang>/assoc-supervisor` = {<副导师姓名>}

`info/<lang>/co-supervisor` ☆ `<lang>/co-supervisor` = {<联合导师姓名>}

Updated: 2023-03-14

导师、副导师、联合导师姓名。

`info/<lang>/degree` ☆ `<lang>/degree` = {<学位名称>}

Updated: 2023-03-14

申请学位中英文名称。包括申请的学位类别和级别,如“工学硕士”、“理学博士”等。学士论文无需标注。

`info/<lang>/department` ☆ `<lang>/department = {<院系名称>}`

Updated: 2023-03-14 院系名称。

`info/<lang>/major` ☆ `<lang>/major = {<专业名称>}`

Updated: 2023-03-14 专业名称。

`info/<lang>/fund` ☆ `<lang>/fund = {<资助基金名称>}`

Updated: 2023-03-14 资助基金列表。各资助基金名称之间需使用英文逗号隔开。为防止歧义，可以用分组括号“{...}”把各字段括起来。

`info/date` ☆ `date = {<ISO 日期>}`

Updated: 2023-02-25 日期。默认值为文档编译日期。也可以自己指定,要求使用 ISO 格式,即 yyyy-mm-dd 或 yyyy-mm, 否则设定无效。该键语言前缀不是必须的。

`info/<lang>/display-date` ☆ `<lang>/display-date = {<日期文字>}`

Updated: 2023-03-14

显示日期,可以显示不同于标准日期格式的日期,日期文字将会被原样输出。设定该键时,将会覆盖 `info/date` 键在对应语言下的设定。

3.2.1.2 适用于 `sjturement` 和 `sjtuarticle` 文档类的命令

`\title` ☆ `\title{<标题>}`

New: 2022-12-17 设置标题,覆盖 `info/title` 键的值。
Updated: 2023-03-14

`\author` ☆ `\author{<姓名>}`

New: 2022-12-17 设置作者姓名,覆盖 `info/author` 键的值。
Updated: 2023-03-14

`\date` ☆ `\date{<日期>}`

New: 2022-12-17 设置日期,覆盖 `info/display-date` 键的值。日期会被原样显示。
Updated: 2023-03-14

`\subject` ☆ `\subject{<主题>}`

New: 2023-03-14 文档主题。覆盖 `info/subject` 键的值。

`\keywords` ☆ `\keywords{<关键词>}`

New: 2023-03-14 文档关键词,使用英文逗号隔开不同的关键词。覆盖 `info/keywords` 键的值。

3.2.2 样式域

`style` `style = {<键值列表>}`

该选项包含许多子项目,用于设置论文样式。具体内容见下。

`style/indent-first` `indent-first = <true|false>`

New: 2024-01-10 章节标题后首段是否缩进。

`style/equation-font` `equation-font = {<字体设置>}`

New: 2023-11-30 行间数学公式的字体设置,该选项主要用于调整行间公式的行距,不建议修改字号字形。`sjtuthesis` 中默认数学公式的行距为字号的 1.2 倍。

`style/float-font` `float-font = {<字体设置>}`

New: 2022-12-03
Updated: 2022-12-27

图、表等浮动体的额外字体设置。默认为 `\zihao{5}`, 五号字。

`style/caption-font` `caption-font = {<字体设置>}`

New: 2022-12-20

题注字体。默认为 `\zihao{5}\bfseries`, 粗体五号字。

`style/subcaption-font` `subcaption-font = {<字体设置>}`

New: 2022-12-20

子图题注字体。默认为 `\zihao{5}\normalfont`, 正常字重五号字。

`style/theorem-header-font` `theorem-header-font = {<字体设置>}`

New: 2024-03-21

定理头(即标题)字体。默认为 `\bfseries\CJKsffamily`, 黑体加粗。

`style/theorem-body-font` `theorem-body-font = {<字体设置>}`

New: 2024-03-21

定理内容字体。默认为 `\normalfont`, 和正文字体相同。

`style/fnmark-style` `fnmark-style = {plain|circled}`

New: 2023-03-28

脚注数字编号样式。plain 表示使用普通数字编号; circled 表示使用带圈数字编号。在 zh 和 ja 语言设置中, 默认为 circled; 在 en 和 de 语言设置中, 默认为 plain。

使用带圈数字编号时, 由于超过 50 的带圈数字没有对应的 Unicode 码位, 所以每页脚注最好不要超过 50 个。带圈数字默认使用 CJK 字体。通常情况下默认字体不一定包含所有带圈数字的字符, 此时可以设置 `fnmark-font` 选项给带圈数字设置合适的字体。

`style/fnmark-font` `fnmark-font = {haranoaji|<字体设置>}`

New: 2022-12-03
Updated: 2023-03-28

脚注编号的额外字体设置。默认为空。可以使用预设 `haranoaji`, 支持在 Unicode 引擎中使用 HaranoAjiMincho 字体中的带圈数字。

`style/num-sep` `num-sep = {<分隔符>}`

New: 2023-12-02

图、表、公式以及定理编号中的分隔符。该选项将统一设定 `float-num-sep`、`equation-num-sep`、`theorem-num-sep` 选项。用户也可以逐项修改编号分隔符。默认为 . 句点。

`style/float-num-sep` `float-num-sep = {<分隔符>}`

Updated: 2023-11-29

图、表等浮动体编号中的分隔符。

`style/equation-num-sep` `equation-num-sep = {<分隔符>}`

Updated: 2023-11-29

公式编号中的分隔符。

`style/theorem-num-sep` `theorem-num-sep = {<分隔符>}`

New: 2023-12-02

定理编号中的分隔符。

`style/header-uppercase` `header-uppercase = {true|false}`

New: 2022-12-20
Updated: 2023-03-14

页眉英文字母是否大写。默认为 false。

`style/header-font` `header-font = {<页眉字体>}`

New: 2022-12-20

页眉字体。

- 在 `sjtuthesis` 文档类中, 默认为 `\zihao{-5}`, 小五号字。
- 在 `sjureport` 和 `sjuarticle` 文档类中, 默认为 `\zihao{-5}\sffamily`, 小五号字黑体。

```
style/footer-font footer-font = {<页脚字体>}
```

New: 2022-12-20 页脚字体。默认为 \zihao{-5}, 小五号字。

```
style/page-number page-number = {<页码设置>}
```

New: 2022-12-03 设置页码的显示样式, 其中 #1 代表当前页码。默认为 {#1}, 即仅显示页码本身。

```
style/keywords-format keywords-format = {plain|hang}
```

New: 2023-11-30 设置关键词格式。默认为 plain 无缩进的普通段落, 另可选 hang 悬挂格式。

3.2.3 名称域

```
name name = {<键值列表>}
```

选项包含许多子项目, 用于设置论文中一些标题的名称。部分选项只能在 sjtthesis 中使用。具体内容见表 4。

```
name/contents
name/listfigure
name/listtable
name/figure
name/table
name/abstract
name/index
name/appendix
name/proof
name/bib
name/figure*
name/table*
name/algorithm
name/listalgorithm
name/abbr
name/nom
name/ack
name/resume
name/digest
name/achv
```

Updated: 2023-03-18

表 4 name 选项的默认设置

选项	lang = zh	lang = en	lang = de	lang = ja
contents	目录	Contents	Inhaltsverzeichnis	目次
listfigure	插图	List of Figures	Abbildungsverzeichnis	図目次
listtable	表格	List of Tables	Tabellenverzeichnis	表目次
figure	图	Figure	Abbildung	図
table	表	Table	Tabelle	表
abstract ☆	摘要	Abstract	Zusammenfassung	概要
index	索引	Index	Index	索引
appendix	附录	Appendix	Anhang	付録
proof	证明	Proof	Beweis	证明
bib	参考文献	Bibliography	Literaturverzeichnis	参考文献
figure*	Figure	图	Figure	Figure
table*	Table	表	Table	Table
algorithm	算法	Algorithm	Algorithmus	アルゴリズム
listalgorithm	算法	List of Algorithms	Algorithmenverzeichnis	アルゴリズム目次
abbr ☆	缩略语对照表	Abbreviation	Abkürzungsverzeichnis	略語表
nom ☆	主要符号对照表	Nomenclature	Symbolverzeichnis	記号表
ack ☆	致谢	Acknowledgements	Danksagungen	謝辞
resume ☆	个人简历	Resume	Lebenslauf	履歴書
digest ☆	大摘要	Digest	Kurzfassung	要約
achv ☆	学术论文和科研成果目录	List of Research Achievements	Forschungsleistungen	研究業績書

第4节 内容编写

```
document \begin{document}
          <文档内容>
        \end{document}
```

在文档开始后内容进行编写, 文档内容由 document 环境包裹。

4.1 标题页和声明页

`\maketitle` `\maketitle`

Updated: 2022-12-03 生成标题。

- 在 `sjtuthesis` 文档类中, 生成标题页。
- 在 `sjturement` 和 `sjtuarticle` 文档类中,
 - 若处于 `titlepage` 文档类选项中, 生成标题页。 `sjturement` 文档类默认。
 - 若处于 `notitlepage` 文档类选项中, 生成标题块。 `sjtuarticle` 文档类默认。

`\copyrightpage` ☆ `\copyrightpage`
`\copyrightpage`[(授权书扫描件)]

Updated: 2022-12-20

生成空白版权使用授权书。接受一个可选参数用于插入版权使用授权书扫描件, 使用可选参数时需要手动加载 `pdfpages` 宏包。

4.2 前文部分

`\frontmatter` ☆ `\frontmatter`

声明前文部分开始。

`abstract` `\begin{abstract}[(lang)]`
 (摘要)
`\end{abstract}`
`\begin{abstract}`
 (摘要)
`\end{abstract}`

Updated: 2023-11-29

摘要环境。会在结尾添加关键词。

- `sjtuthesis` 文档类中, 可以设置可选参数指定摘要的语言, 默认为 `zh`。
- `sjtuarticle` 和 `sjturement` 文档类中, 不需要可选参数。

`abstract*` ☆ `sjtuthesis` 文档类中使用带星号的 `abstract*` 环境不会出现在目录中。

Updated: 2023-11-29

`\tableofcontents` 目录、插图、表格和算法等索引命令如表 5 所示, 将其插入到期望的位置即可。带 * 的命令表示
`\tableofcontents*` 对应的索引表不会出现在目录中。

`\listoffigures`
`\listoffigures*`
`\listoftables`
`\listoftables*`
`\listofalgorithms`
`\listofalgorithms*`

表 5 目录和索引表

用途	命令	用途	命令
目录	<code>\tableofcontents</code>	插图索引	<code>\listoffigures</code>
	<code>\tableofcontents*</code>		<code>\listoffigures*</code>
表格索引	<code>\listoftables</code>	算法索引 ^a	<code>\listofalgorithms</code>
	<code>\listoftables*</code>		<code>\listofalgorithms*</code>

a 启用 `algorithm2e` 或 `algorithm` 后有效。

4.3 正文部分

`\mainmatter` ☆ `\mainmatter`

声明正文部分开始。正文部分是论文的核心, 您可以分章节撰写。如有需求, 也可以采用多文件编译的方式。

`\footnote` `\footnote`[(脚注编号)]{(脚注文字)}

Updated: 2022-12-03

插入脚注。其中脚注编号参数是可选的, 一般不需要输入。

	assumption	axiom	conjecture	corollary	definition	example	exercise
assumption	假设	公理	猜想	推论	定义	例	练习
axiom							
conjecture							
corollary							
definition							
example							
exercise							
lemma	引理	问题	证明	命题	注	解	定理
problem							
proposition							
theorem							

表 6 预定义的数学环境

`\setbaselineskip` `\setbaselineskip`{(长度)}

New: 2023-10-24 设置当前的基线间距, 一般在字号命令之后使用。

`\appendix` `\appendix`

附录由 `\appendix` 命令开启, 然后像正文一样书写。

`nomenclature` ☆ `\begin{nomenclature}`[(标题)]

`nomenclature*` ☆ (符号对照表)

`\end{nomenclature}`

Updated: 2022-03-02

符号对照表环境。带星号的版本不会出现在目录中。可以使用可选参数手动设置标题。符号对照表环境仅设置标题, 内部实现可由用户自行决定。可以使用 `longtable`, 也可以使用 `nomenc` 宏包。

`abbreviation` ☆ `\begin{abbreviation}`[(标题)]

`abbreviation*` ☆ (缩略语对照表)

`\end{abbreviation}`

Updated: 2022-03-02

缩略语对照表环境。带星号的版本不会出现在目录中。可以使用可选参数手动设置标题。缩略语对照表环境仅设置标题, 内部实现可由用户自行决定。

4.4 后文部分

`\backmatter` ☆ `\backmatter`

声明后文部分开始。后文部分包含致谢等。

`acknowledgements` ☆ `\begin{acknowledgements}`[(标题)]

(致谢内容)

Updated: 2022-02-24

`\end{acknowledgements}`

致谢环境。盲审模式下致谢将被隐去。可以使用可选参数手动设置标题。

`achievements` ☆ `\begin{achievements}`[(标题)]

(获得的科研成果)

Updated: 2022-02-24

`\end{achievements}`

科研成果环境, 可以使用可选参数手动设置标题。内部请配合使用下面的附录用文献列表环境 `bibliolist` 和 `bibliolist*`。你可以在该环境中使用带星号的节次命令以分隔不同的类型的成果(比如学术论文、专利等); 你也可以使用多个 `achievements` 环境, 配合不同的可选参数作为标题, 展示不同类型的成果。

```

bibliolist ☆ \begin{bibliolist}{<最长条目编号>}
bibliolist* ☆ \item <文献条目>
Updated: 2022-03-23 \end{bibliolist}
\begin{bibliolist*}{<最长条目编号>}
\item <文献条目 (隐去姓名)>
\end{bibliolist*}

```

附录用文献环境,只允许在 `achievements` 环境中使用。需要指定最长条目的编号作为参数,比如 99; 如果将该强制参数被指定为空,将不显示编号,每条以悬挂缩进做区分。环境内部使用 `\item` 来分隔各条目,在同一个 `achievements` 环境内、不同的 `bibliolist` 或 `bibliolist*` 环境中编号连续递增、不会间断。普通模式下显示 `bibliolist` 中的内容,盲审模式下显示 `bibliolist*` 中的内容。

```

resume ☆ \begin{resume}[<标题>]
Updated: 2022-02-24 <简历内容>
\end{resume}

```

简历环境。盲审模式下简历将被隐去。可以使用可选参数手动设置标题。

```

digest ☆ \begin{digest}[<lang>]
<大摘要>
\end{digest}

```

学士论文大摘要,使用可选参数设定语言,默认为 `en`。

第 5 节 宏包依赖情况

使用不同编译方式、指定不同选项,会导致宏包依赖情况有所不同。具体如下:

- 在任何情况下,文档类都会显式调用以下宏包(或文档类):
 - `ctexbook`, `ctexrep` 和 `ctexart`, 提供中文排版的通用框架。属于 $\text{CT}_{\text{E}}\text{X}$ 宏集 [9]。
 - `mathtools`, 对 $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ 的数学排版功能进行了全面扩展。是 `amsmath` 的扩充。
 - `geometry`, 用于调整页面尺寸。
 - `fancyhdr`, 处理页眉页脚。
 - `titletoc`, 设置目录格式。
 - `caption`, `bicaption` 和 `subcaption`, 用于设置题注。
 - `xcolor`, 提供彩色支持。
 - `graphicx`, 提供图形插入的接口。
 - `enumitem`, 设置列表环境格式。
- `sjtuthesis` 会调用 `xtemplate` 和 `array`, 用于辅助标题页等特殊页面的排版。
- 部分西文与数学字体预设会调用相关的字体宏包,具体调用情况请参见对应的字体预设文件。
- 部分数字字体预设会调用 `unicode-math` 处理 Unicode 编码的 OpenType 数学字体。在未启用 `unicode-math` 的情况下,会调用 `bm` 来选择粗体数学符号。

这里只列出了本模板直接调用的宏包。这些宏包自身的调用情况,此处不再具体展开。如有需要,请参阅相关文档。

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源代码³: [CTAN://systems/knuth/dist/tex/texbook.tex](https://ctan.org/systems/knuth/dist/tex/texbook.tex)

³此代码只可作为学习之用。未经 Knuth 本人同意,您不应当编译此文档。

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文档及源代码: [CTAN://macros/latex/contrib/thuthesis/thuthesis.pdf](https://ctan.org/pkg/thuthesis)

第6节 代码实现

本模板使用 L^AT_EX3 语法编写, 依赖 `expl3` 环境, 并需调用 `l3packages` 中的相关宏包。

```
1 <@@=sjtu>
```

6.1 内部变量

<code>\l__sjtu_tmp_bool</code>	临时变量。
<code>\l__sjtu_tmp_clist</code>	2 <*class>
<code>\l__sjtu_tmp_dim</code>	3 \bool_new:N \l__sjtu_tmp_bool
<code>\l__sjtu_tmp_skip</code>	4 \clist_new:N \l__sjtu_tmp_clist
<code>\l__sjtu_tmp_box</code>	5 \dim_new:N \l__sjtu_tmp_dim
	6 \skip_new:N \l__sjtu_tmp_skip
	7 \box_new:N \l__sjtu_tmp_box
<code>\g__sjtu_thesis_type_int</code>	论文类型。
	8 \int_new:N \g__sjtu_thesis_type_int
<code>\g__sjtu_lang_tl</code>	论文语言。
<code>\g__sjtu_lang_clist</code>	9 \tl_new:N \g__sjtu_lang_tl
<code>\c__sjtu_lang_de_tl</code>	10 \clist_set:Nn \g__sjtu_lang_clist { zh, en }
<code>\c__sjtu_lang_ja_tl</code>	11 \tl_const:Nn \c__sjtu_lang_de_tl { de }
	12 \tl_const:Nn \c__sjtu_lang_ja_tl { ja }
<code>\g__sjtu_zihao_tl</code>	字号大小与行距。
<code>\g__sjtu_font_size_int</code>	13 \tl_new:N \g__sjtu_zihao_tl
<code>\g__sjtu_font_size_dim</code>	14 \int_new:N \g__sjtu_font_size_int
<code>\g__sjtu_baseline_skip_dim</code>	15 \dim_new:N \g__sjtu_font_size_dim
<code>\g__sjtu_fixed_baselineskip_bool</code>	16 \dim_new:N \g__sjtu_baseline_skip_dim
<code>\g__sjtu_line_spread_fp</code>	17 \bool_new:N \g__sjtu_fixed_baselineskip_bool
	18 \fp_new:N \g__sjtu_line_spread_fp
<code>\g__sjtu_text_font_tl</code>	字体配置。
<code>\g__sjtu_math_font_tl</code>	19 \tl_new:N \g__sjtu_text_font_tl
<code>\g__sjtu_cjk_font_tl</code>	20 \tl_new:N \g__sjtu_math_font_tl
	21 \tl_new:N \g__sjtu_cjk_font_tl
<code>\g__sjtu_slanted_uppercase_greek_bool</code>	大写希腊字母的正/斜体。
	22 \bool_new:N \g__sjtu_slanted_uppercase_greek_bool
<code>\g__sjtu_upright_integral_bool</code>	积分号的正/斜体。
	23 \bool_new:N \g__sjtu_upright_integral_bool
<code>\g__sjtu_integral_limits_bool</code>	积分号上下限的位置。
	24 \bool_new:N \g__sjtu_integral_limits_bool
<code>\g__sjtu_math_font_options_clist</code>	传入数学字体宏包的选项列表。
	25 \clist_new:N \g__sjtu_math_font_options_clist
<code>\g__sjtu_review_bool</code>	盲审模式。
	26 \bool_new:N \g__sjtu_review_bool
<code>\g__sjtu_options_to_ctex_class_clist</code>	保存由 <code>sjtutex</code> 传入 <code>ctex</code> 文档类的选项列表。默认 <code>ctex</code> 文档类的选项: 使用 UTF8 编码, 不调整基础类的版式以及不载入 <code>ctex</code> 字体预设配置。
	27 \clist_set:Nn \g__sjtu_options_to_ctex_class_clist
	28 { a4paper, UTF8, scheme = plain, fontset = none }

```

\g__sjtu_options_to_packages_clist 保存由传入其他宏包的选项列表。
    29 \clist_new:N \g__sjtu_options_to_packages_clist

\g__sjtu_twoside_bool 是否开启双页模式。
    30 \bool_new:N \g__sjtu_twoside_bool
<thesis> 31 \bool_set_true:N \g__sjtu_twoside_bool
<!thesis> 32 \bool_set_false:N \g__sjtu_twoside_bool

\g__sjtu_openright_bool 是否在奇数页开始新章。
<!article> 33 \bool_new:N \g__sjtu_openright_bool
<thesis> 34 \bool_set_true:N \g__sjtu_openright_bool
<report> 35 \bool_set_false:N \g__sjtu_openright_bool

\g__sjtu_titlepage_bool 是否生成标题页。
<!thesis> 36 \bool_new:N \g__sjtu_titlepage_bool
<report> 37 \bool_set_true:N \g__sjtu_titlepage_bool
<article> 38 \bool_set_false:N \g__sjtu_titlepage_bool

\g__sjtu_draft_bool 是否开启草稿模式。
    39 \bool_new:N \g__sjtu_draft_bool

__sjtu_deprecated_option:n 对过时选项给出警告。
__sjtu_set_deprecated_option:n
    40 \cs_new_protected:Npn __sjtu_deprecated_option:n
    41   { \msg_warning:nnn { sjtutex } { deprecated-option } }
    42 \cs_new_protected:Npn __sjtu_set_deprecated_option:n #1
    43   {
    44     __sjtu_deprecated_option:n { Option~`#1'~ is~ set. }
    45     \keys_set:nn { sjtu / option } {#1}
    46   }
    47 \msg_new:nnn { sjtutex } { deprecated-option }
    48   { Option~`\l_keys_key_tl'~ is~ deprecated. \\ #1 }

```

6.2 选项处理

定义 sjtu/option 键值类。

```

49 \keys_define:nn { sjtu / option }
50   {

```

type 论文类型。

```

51 <*thesis>
52   type .choice: ,
53   type .value_required:n = true ,
54   type .choices:nn =
55     { bachelor, master, doctor }
56     { \int_gset_eq:NN \g__sjtu_thesis_type_int \l_keys_choice_int } ,
57   type .initial:n = { master } ,
58 </thesis>

```

lang 论文主要语言。

```

59   lang .choice: ,
60   lang .value_required:n = true ,
61   lang .choices:nn =
62     { zh, en, de, ja }
63     {
64       \tl_gset_eq:NN \g__sjtu_lang_tl \l_keys_choice_tl
65 <*thesis>
66       \clist_if_in:NnF \g__sjtu_lang_clist {#1}
67       { \clist_gput_right:Nn \g__sjtu_lang_clist {#1} }
68 </thesis>
69     } ,
70   lang .initial:n = { zh } ,

```


zihao 字号大小。

```

71   zihao .choice: ,
72   zihao .value_required:n = true ,
73   zihao / 5 .code:n =
74   {
75     \tl_gset:Nn \g__sjtu_zihao_tl {#1}
76     \int_gset:Nn \g__sjtu_font_size_int { 1 }
77     \dim_gset:Nn \g__sjtu_font_size_dim { 10.5 bp }
78   } ,
79   zihao / -4 .code:n =
80   {
81     \tl_gset:Nn \g__sjtu_zihao_tl {#1}
82     \int_gset:Nn \g__sjtu_font_size_int { 2 }
83     \dim_gset:Nn \g__sjtu_font_size_dim { 12 bp }
84   } ,
<|article> 85   zihao .initial:n = { -4 } ,
<|article> 86   zihao .initial:n = { 5 } ,

```

linespread 行距倍数。

```

87   linespread .fp_gset:N = \g__sjtu_line_spread_fp ,
88   linespread .initial:n = { \c_nan_fp } ,
89   linespread .value_required:n = true ,

```

baselineskip 正文基线间距。

```

90   baselineskip .choice: ,
91   baselineskip .value_required:n = true ,
92   baselineskip / false .code:n =
93   { \bool_gset_false:N \g__sjtu_fixed_baselineskip_bool } ,
94   baselineskip / unknown .code:n =
95   {
96     \bool_gset_true:N \g__sjtu_fixed_baselineskip_bool
97     \dim_gset:Nn \g__sjtu_baseline_skip_dim {#1}
98   } ,
<|thesis> 99   baselineskip .initial:n = { 20 bp } ,
<|thesis> 100  baselineskip .initial:n = { false } ,

```

text-font 字体配置。

```

101  text-font .tl_gset:N = \g__sjtu_text_font_tl ,
102  text-font .initial:n = { newtx } ,
103  math-font .tl_gset:N = \g__sjtu_math_font_tl ,
104  cjk-font .tl_gset:N = \g__sjtu_cjk_font_tl ,

```

fontset 是过时选项。

```

105   fontset .code:n = { \__sjtu_set_deprecated_option:n { cjk-font = #1 } } ,

```

math-style 数学符号样式。

```

106   math-style .choice: ,
107   math-style .value_required:n = true ,
108   math-style / TeX .code:n =
109   {
110     \bool_gset_false:N \g__sjtu_slanted_uppercase_greek_bool
111     \bool_gset_false:N \g__sjtu_upright_integral_bool
112     \bool_gset_false:N \g__sjtu_integral_limits_bool
113   } ,
114   math-style / ISO .code:n =
115   {
116     \bool_gset_true:N \g__sjtu_slanted_uppercase_greek_bool
117     \bool_gset_true:N \g__sjtu_upright_integral_bool
118     \bool_gset_true:N \g__sjtu_integral_limits_bool
119   } ,
120   math-style .initial:n = { ISO } ,

```

uppercase-greek 大写希腊字母的正/斜体。

```

121 uppercase-greek .choice: ,
122 uppercase-greek .value_required:n = true ,
123 uppercase-greek / slanted .code:n =
124   { \bool_gset_true:N \g__sjtu_slanted_uppercase_greek_bool } ,
125 uppercase-greek / upright .code:n =
126   { \bool_gset_false:N \g__sjtu_slanted_uppercase_greek_bool } ,

```

integral 积分号的正/斜体。

```

127 integral .choice: ,
128 integral .value_required:n = true ,
129 integral / slanted .code:n =
130   { \bool_gset_false:N \g__sjtu_upright_integral_bool } ,
131 integral / upright .code:n =
132   { \bool_gset_true:N \g__sjtu_upright_integral_bool } ,

```

integral-limits 积分号上下限的位置。

```

133 integral-limits .choice: ,
134 integral-limits .value_required:n = true ,
135 integral-limits / false .code:n =
136   { \bool_gset_false:N \g__sjtu_integral_limits_bool } ,
137 integral-limits / true .code:n =
138   { \bool_gset_true:N \g__sjtu_integral_limits_bool } ,

```

oneside 单面或双面模式。

twoside

```

139 oneside .value_forbidden:n = true,
140 twoside .value_forbidden:n = true,
141 oneside .code:n =
142   { \bool_gset_false:N \g__sjtu_twoside_bool } ,
143 twoside .code:n =
144   { \bool_gset_true:N \g__sjtu_twoside_bool } ,

```

openany 是否奇数页开章。

openright

```

145 <!*article>
146 openany .value_forbidden:n = true,
147 openright .value_forbidden:n = true,
148 openany .code:n =
149   { \bool_gset_false:N \g__sjtu_openright_bool } ,
150 openright .code:n =
151   { \bool_gset_true:N \g__sjtu_openright_bool } ,
152 </!article>

```

titlepage 是否生成标题页。

notitlepage

```

153 <!*thesis>
154 titlepage .value_forbidden:n = true,
155 notitlepage .value_forbidden:n = true,
156 titlepage .code:n =
157   { \bool_gset_true:N \g__sjtu_titlepage_bool } ,
158 notitlepage .code:n =
159   { \bool_gset_false:N \g__sjtu_titlepage_bool } ,
160 </!thesis>

```

draft 是否开启草稿模式。

final

```

161 draft .value_forbidden:n = true,
162 final .value_forbidden:n = true,
163 draft .code:n =
164   { \bool_gset_true:N \g__sjtu_draft_bool } ,
165 final .code:n =
166   { \bool_gset_false:N \g__sjtu_draft_bool } ,

```

review 盲审模式。

```

<(thesis) 167 review .bool_gset:N = \g__sjtu_review_bool ,
<(thesis) 168 review .initial:n = false ,

```

处理未知选项。

```

169   unknown .code:n = { \msg_error:nn { sjtutex } { unknown-option } }
170 }
171 \msg_new:nnn { sjtutex } { unknown-option }
172 { Class~ option~ "\l_keys_key_tl"~ is~ unknown. }

```

将文档类选项传给 sjtu/option。

```

173 \cs_if_exist:NTF \ProcessKeyOptions
174 { \ProcessKeyOptions [ sjtu / option ] }
175 {
176   \RequirePackage { l3keys2e }
177   \ProcessKeysOptions { sjtu / option }
178 }

```

sjturement 和 sjtuarticle 文档类默认使用 1.3 行距倍数。

```

179 <!*thesis>
180 \bool_if:NF \g__sjtu_fixed_baselineskip_bool
181 {
182   \fp_if_nan:nT { \g__sjtu_line_spread_fp }
183   { \fp_set:Nn \g__sjtu_line_spread_fp { 1.3 } }
184 }
185 </!*thesis>

```

数字字体宏包选项。

```

186 \clist_set:Nx \g__sjtu_math_font_options_clist
187 {
188   \bool_if:NT \g__sjtu_slanted_uppercase_greek_bool
189   { slantedGreek } ,
190   \bool_if:NT \g__sjtu_upright_integral_bool
191   { upint }
192 }

```

追加全局选项。

```

193 \clist_put_right:Nx \@classoptionslist
194 {
195   a4paper ,
196   \tl_if_eq:NNT \g__sjtu_lang_tl \c__sjtu_lang_de_tl
197   { german, ngerman } ,
198   \bool_if:NT \g__sjtu_integral_limits_bool
199   { intlimits } ,
200   \g__sjtu_math_font_options_clist
201 }

```

设置传入 ctex 文档类的选项。

```

202 \clist_put_right:Nx \g__sjtu_options_to_ctex_class_clist
203 {
204   zihao      = \g__sjtu_zihao_tl ,
205   \fp_if_nan:nF { \g__sjtu_line_spread_fp }
206   { linespread = \fp_use:N \g__sjtu_line_spread_fp } ,
207   \bool_if:NTF \g__sjtu_twoside_bool
208   { twoside } { oneside } ,
<!article> 209   \bool_if:NTF \g__sjtu_openright_bool
<!article> 210   { openright } { openany } ,
<!thesis> 211   \bool_if:NTF \g__sjtu_titlepage_bool
<!thesis> 212   { titlepage } { notitlepage } ,
213   \bool_if:NTF \g__sjtu_draft_bool
214   { draft } { final }
215 }

```

6.3 载入宏包、文档类

将选项传入 `ctex` 文档类。

```
216 \exp_args:No \PassOptionsToClass
217 { \g__sjtu_options_to_ctex_class_clist }
<thesis> 218 { ctexbook }
<report> 219 { ctexrep }
<article> 220 { ctexart }
```

传入各宏包选项。

```
221 \clist_set:Nx \g__sjtu_options_to_packages_clist
222 {
223   { no-math          } { fontspec      } ,
224   { list = off      } { bcaption    } ,
225   { warnings-off =
226     {
227       mathtools-overbracket,
228       mathtools-colon
229     }
230   } { unicode-math } ,
231   { amsmath, thmmarks } { ntheorem   } ,
<!article> 232   { chapter          } { algorithm   } ,
<!article> 233   { algochapter      } { algorithm2e } ,
234   {
235     \bool_if:NTF \g__sjtu_integral_limits_bool
236       { displaylimits } { nolimits }
237   } { cmupint      }
238 }
239 \clist_map_inline:Nn \g__sjtu_options_to_packages_clist
240 { \PassOptionsToPackage #1 }
```

载入 `ctex` 文档类。在使用 XeLaTeX 编译时, `ctex` 的底层将调用 `xeCJK` 宏包; 而在使用 LuaLaTeX 编译时, 则将调用 `LuaTeX-ja` 宏包。两种情况下 `ctex` 均会调用 `fontspec` 宏包。

```
<thesis> 241 \LoadClass { ctexbook }
<report> 242 \LoadClass { ctexrep }
<article> 243 \LoadClass { ctexart }
```

载入各宏包。

```
244 \RequirePackage
245 {
<thesis> 246   xtemplate,
<thesis> 247   array,
248   mathtools,
249   geometry,
250   fancyhdr,
251   titletoc,
252   caption,
253   bcaption,
254   subcaption,
255   xcolor,
256   graphicx,
257   enumitem
258 }
```

6.4 内部定义

6.4.1 内部函数

LaTeX3 函数变体。

```
\cs_gset:cpo 259 \cs_generate_variant:Nn \cs_gset:Npn { cpo }
\tl_const:Nv 260 \cs_generate_variant:Nn \tl_const:Nn { Nv }
\clist_use:NV 261 \cs_generate_variant:Nn \clist_use:Nn { NV, cv }
\exp_args:NNnv 262 \exp_args_generate:n { Nnv }
\exp_last_unbraced:ce
\regex_match:neTF
```

```

263 \cs_generate_variant:Nn \exp_last_unbraced:Ne { ce }
264 \prg_generate_conditional_variant:Nnn \regex_match:nn { ne } { T, TF }

```

`__sjtu_engine_case:nn` 2 个参数依次为 pdfTeX 和 XeTeX/LuaTeX。

```

265 \cs_new:Npx \__sjtu_engine_case:nn #1#2
266 {
267   \bool_lazy_or:nnTF
268     { \sys_if_engine_xetex_p: }
269     { \sys_if_engine luatex_p: }
270     {#2}
271     { \sys_if_engine_pdftex:T {#1} }
272 }

```

`__sjtu_engine_case:nnn` 3 个参数依次为 pdfTeX、XeTeX 和 LuaTeX。

```

273 \cs_new:Npx \__sjtu_engine_case:nnn #1#2#3
274 {
275   \sys_if_engine_xetex:TF
276     {#2}
277     {
278       \sys_if_engine luatex:TF
279         {#3}
280         { \sys_if_engine_pdftex:T {#1} }
281     }
282 }

```

`__sjtu_unicode_engine_case:nn` 2 个参数依次为 XeTeX 和 LuaTeX。

```

283 \cs_new:Npx \__sjtu_unicode_engine_case:nn #1#2
284 {
285   \sys_if_engine_xetex:TF
286     {#1}
287     { \sys_if_engine luatex:T {#2} }
288 }

```

`__sjtu_unicode_char:n` 289 `__sjtu_engine_case:nn`

```

290 {
291   \cs_new:Npn \__sjtu_unicode_char:n #1
292     {
293       \exp_not:N \Unicode
294       { \int_div_truncate:nn {#1} { 256 } }
295       { \int_mod:nn {#1} { 256 } }
296     }
297 }
298 { \cs_new:Npn \__sjtu_unicode_char:n #1 { \tex_Uchar:D #1 \scan_stop: } }

```

`__sjtu_preto_cmd:Nn` 补丁工具, 来自 `ctexpatch` 宏包, 在宏的原本定义前后增加钩子。

```

\__sjtu_appto_cmd:Nn
299 <!*thesis>
300 \cs_new_protected:Npn \__sjtu_preto_cmd:Nn #1#2
301 {
302   \ctex_preto_cmd:NnnTF #1 { } {#2}
303   { } { \ctex_patch_failure:N #1 }
304 }
305 \cs_new_protected:Npn \__sjtu_appto_cmd:Nn #1#2
306 {
307   \ctex_appto_cmd:NnnTF #1 { } {#2}
308   { } { \ctex_patch_failure:N #1 }
309 }
310 </!thesis>

```

`__sjtu_dim_set_to_wd:Nn` 操作长度变量的辅助函数。

```

\__sjtu_skip_add_to_wd:Nn
311 <!*thesis>
312 \cs_new:Npn \__sjtu_dim_set_to_wd:Nn #1#2
313 {
314   \hbox_set:Nn \l__sjtu_tmp_box {#2}
315   \dim_set:Nn #1 { \box_wd:N \l__sjtu_tmp_box }

```

```

316 }
317 </thesis>
318 \cs_new:Npn \__sjtu_skip_add_to_wd:Nn #1#2
319 {
320   \hbox_set:Nn \l__sjtu_tmp_box {#2}
321   \skip_add:Nn #1 { \box_wd:N \l__sjtu_tmp_box }
322 }
<thesis> 323 \cs_generate_variant:Nn \__sjtu_dim_set_to_wd:Nn { Nv }
324 \cs_generate_variant:Nn \__sjtu_skip_add_to_wd:Nn { cv }

\__sjtu_cs_provide_eq:NN 325 \cs_new:Npn \__sjtu_cs_provide_eq:NN #1#2
326 { \cs_if_exist:NF #1 { \cs_set_eq:NN #1 #2 } }
327 \cs_generate_variant:Nn \__sjtu_cs_provide_eq:NN { cc }

```

__sjtu_vspace:N 类似 L^AT_EX_{2 ϵ} 中的 \vspace 和 \vspace*。

```

\__sjtu_vspace:n
\__sjtu_vspace_r:N 328 <*thesis>
\__sjtu_vspace_r:N 329 \cs_new_protected:Npn \__sjtu_vspace:N #1
\__sjtu_vspace_r:n 330 {
331   \skip_vertical:N #1
332   \skip_vertical:N \c_zero_skip
333 }
334 \cs_new_protected:Npn \__sjtu_vspace:n #1
335 {
336   \skip_set:Nn \l__sjtu_tmp_skip {#1}
337   \__sjtu_vspace:N \l__sjtu_tmp_skip
338 }
339 \cs_new_protected:Npn \__sjtu_vspace_r:N #1
340 {
341   \dim_set_eq:NN \l__sjtu_tmp_dim \prevdepth
342   \hrule height \c_zero_dim
343   \nobreak
344   \skip_vertical:N #1
345   \skip_vertical:N \c_zero_skip
346   \dim_set_eq:NN \prevdepth \l__sjtu_tmp_dim
347 }
348 \cs_new_protected:Npn \__sjtu_vspace_r:n #1
349 {
350   \skip_set:Nn \l__sjtu_tmp_skip {#1}
351   \__sjtu_vspace_r:N \l__sjtu_tmp_skip
352 }
353 </thesis>

```

__sjtu_define_name:nn 定义默认名称的辅助函数。

```

\__sjtu_define_name:nv
\__sjtu_define_name:nnn 354 \cs_new_protected:Npn \__sjtu_define_name:nn #1#2
\__sjtu_define_name:nnn 355 { \tl_const:cn { c__sjtu_name_ #1 _tl } {#2} }
\__sjtu_define_name_from_clist:nnnn 356 \cs_new_protected:Npn \__sjtu_define_name:nnn #1#2#3
\__sjtu_define_name_from_clist:nnnn 357 { \tl_const:cn { c__sjtu_name_ #2 _ #1 _tl } {#3} }
358 <*thesis>
359 \cs_new_protected:Npn \__sjtu_define_name_from_clist:nnnn #1#2#3#4
360 { \tl_const:cx { c__sjtu_name_ #2 _ #1 _tl } { \clist_item:nn {#4} {#3} } }
361 \cs_generate_variant:Nn \__sjtu_define_name:nn { nv }
362 </thesis>

```

__sjtu_define_symbol:nn 定义符号的辅助函数。

```

363 \cs_new_protected:Npn \__sjtu_define_symbol:nn #1#2
364 { \tl_const:cx { c__sjtu_symbol_ #1 _tl } { \__sjtu_unicode_char:n {#2} } }

```

__sjtu_if_lang_valid:nTF 验证语言选项的函数。

```

365 <*thesis>
366 \cs_new_protected:Npn \__sjtu_if_lang_valid:nTF #1
367 { \clist_if_in:NnTF \g__sjtu_lang_clist {#1} }
368 \msg_new:nnn { sjtutex } { lang-validation }
369 { Invalid~ language~ argument~ `#1'! }

```

6.4.2 页面模板

使用 `xtemplate` 构建页面模板,用于绘制标题页与版权页。
页面部件模板。

```

370 \DeclareObjectType { sjtu } { 0 }
371 \DeclareTemplateInterface { sjtu } { component } { 0 }
372 {
373   format      : tokenlist = \c_empty_tl ,
374   content     : tokenlist = \c_empty_tl ,
375   bottom-skip : skip      = \c_zero_skip ,
376   align       : choice { left, right, center, normal } = center
377 }
378 \DeclareTemplateCode { sjtu } { component } { 0 }
379 {
380   format      = \l__sjtu_component_format_tl ,
381   content     = \l__sjtu_component_content_tl ,
382   bottom-skip = \l__sjtu_component_bottom_skip ,
383   align       =
384   {
385     left      =
386       \cs_set_eq:NN \l__sjtu_component_align: \raggedright ,
387     right     =
388       \cs_set_eq:NN \l__sjtu_component_align: \raggedleft ,
389     center    =
390       \cs_set_eq:NN \l__sjtu_component_align: \centering ,
391     normal    =
392       \cs_set_eq:NN \l__sjtu_component_align: \prg_do_nothing:
393   }
394 }
395 {
396   \AssignTemplateKeys
397   \group_begin:
398     \l__sjtu_component_align:
399     \l__sjtu_component_format_tl
400     \l__sjtu_component_content_tl
401   \par
402   \group_end:
403   \l__sjtu_vspace:N \l__sjtu_component_bottom_skip
404 }

```

页面模板。

```

405 \DeclareTemplateInterface { sjtu } { page } { 0 }
406 {
407   bookmark      : boolean = false ,
408   bookmark-text : tokenlist = \c_empty_tl ,
409   style         : tokenlist = empty ,
410   format        : tokenlist = \c_empty_tl ,
411   prefix        : tokenlist ,
412   components    : commalist ,
413   top-skip      : skip      = \c_zero_skip ,
414   bottom-skip   : skip      = \c_zero_skip
415 }
416 \DeclareTemplateCode { sjtu } { page } { 0 }
417 {
418   bookmark      = \l__sjtu_page_bookmark_bool ,
419   bookmark-text = \l__sjtu_page_bookmark_text_tl ,
420   style         = \l__sjtu_page_style_tl ,
421   format        = \l__sjtu_page_format_tl ,
422   prefix        = \l__sjtu_page_prefix_tl ,
423   components    = \l__sjtu_page_components_clist ,
424   top-skip      = \l__sjtu_page_top_skip ,
425   bottom-skip   = \l__sjtu_page_bottom_skip
426 }
427 {
428   \AssignTemplateKeys
429   \bool_if:NTF \g__sjtu_openright_bool

```

```

430     { \cleardoublepage } { \clearpage }
431     \bool_if:NT \l__sjtu_page_bookmark_bool
432     { \__sjtu_pdf_bookmark:nn { 0 } { \l__sjtu_page_bookmark_text_tl } }
433     \exp_args:No \thispagestyle { \l__sjtu_page_style_tl }

```

移除页面顶部 `\vspace*` 的多余空白。见 <https://tex.stackexchange.com/questions/247513>。

```

434     \__sjtu_vspace_r:N \l__sjtu_page_top_skip
435     \__sjtu_vspace:n { - \tex_parskip:D }
436     \__sjtu_vspace:n { - \tex_baselineskip:D }
437     \group_begin:
438         \l__sjtu_page_format_tl
439         \clist_map_inline:Nn \l__sjtu_page_components_clist
440             { \UseInstance { sjtu } { \l__sjtu_page_prefix_tl / ##1 } }
441     \group_end:
442     \__sjtu_vspace:N \l__sjtu_page_bottom_skip
443     \clearpage
444 }

```

辅助函数。

```

445 \cs_new:Npn \__sjtu_declare_component:nnn #1#2#3
446 { \DeclareInstance { sjtu } {#1/#2} { component } {#3} }
447 \cs_new:Npn \__sjtu_declare_page:nn #1#2
448 { \DeclareInstance { sjtu } {#1} { page } {#2} }
449 </thesis>

```

6.5 字号行距

重定义 `\normalsize`, 设置正文的基线间距。

```

\__sjtu_set_font_size:nnNn \normalsize
450 \cs_new_protected:Npn \__sjtu_set_font_size:nnNn #1#2#3#4
451 { \cs_set_protected:Npn #3 { \@setfontsize #3 {#1} {#2} #4 } }
452 \tl_set:Nx \l__sjtu_font_size_tl
453 {
454   { \dim_to_decimal:n { \g__sjtu_font_size_dim } }
455   { \dim_to_decimal:n { \g__sjtu_baseline_skip_dim } }
456 }
457 \bool_if:NT \g__sjtu_fixed_baselineskip_bool
458 {
459   \int_case:nn { \g__sjtu_font_size_int }
460   {
461     { 1 } {
462       \exp_after:wN \__sjtu_set_font_size:nnNn \l__sjtu_font_size_tl
463       \normalsize
464       {
465         \abovedisplayskip 10\p@ \@plus2\p@ \@minus5\p@
466         \abovedisplayshortskip \z@ \@plus3\p@
467         \belowdisplayshortskip 6\p@ \@plus3\p@ \@minus3\p@
468         \belowdisplayskip \abovedisplayskip
469         \let\@listi\@listI
470       }
471     }
472     { 2 } {
473       \exp_after:wN \__sjtu_set_font_size:nnNn \l__sjtu_font_size_tl
474       \normalsize
475       {
476         \abovedisplayskip 12\p@ \@plus3\p@ \@minus7\p@
477         \abovedisplayshortskip \z@ \@plus3\p@
478         \belowdisplayshortskip 6.5\p@ \@plus3.5\p@ \@minus3\p@
479         \belowdisplayskip \abovedisplayskip
480         \let\@listi\@listI
481       }
482     }
483   }
484   \normalsize
485 }

```


`\setbaselineskip` 设置基线间距, 在字号命令之后使用。

```
486 \NewDocumentCommand \setbaselineskip { m }
487 { \fontsize { \f@size } {#1} \selectfont }
```

6.6 字体配置

`__sjtu_fontset_error:nn` 字库不可用时给出紧急错误信息, 停止读取定义文件。

```
488 \cs_new_protected:Npn \__sjtu_fontset_error:nn #1#2
489 { \msg_error:nnnn { sjtutex } { font-unavailable } {#1} {#2} }
490 \msg_new:nnn { sjtutex } { font-unavailable }
491 { `#1-font~ =~ #2'~ is~ unavailable~ in~ current~ mode. }
```

`__sjtu_fontset_case:nn` 2 个参数依次为 pdfTeX 和 XeTeX/LuaTeX。

```
492 \cs_new_eq:NN \__sjtu_fontset_case:nn \__sjtu_engine_case:nn
```

`__sjtu_fontset_case:nnn` 3 个参数依次为 pdfTeX(生成 PDF)、pdfTeX(生成 DVI)和 XeTeX/LuaTeX。

```
493 \cs_new:Npx \__sjtu_fontset_case:nnn #1#2#3
494 {
495   \__sjtu_engine_case:nn
496   { \sys_if_output_pdf:TF {#1} {#2} }
497   {#3}
498 }
```

`__sjtu_declare_math_symbol:nnNn`

```
499 \cs_new_protected:Nn \__sjtu_declare_math_symbol:nnNn
500 {
501   \cs_undefine:N #3
502   \DeclareMathSymbol {#3} {#1} {#2} {#4}
503 }
```

`__sjtu_set_slanted_greek:`

```
504 \cs_new_protected:Nn \__sjtu_set_slanted_greek:
505 {
506   \clist_const:Nn \c__sjtu_uppercase_greek_clist
507   { Gamma, Delta, Theta, Lambda, Xi, Pi, Sigma, Upsilon, Phi, Psi, Omega }
508   \clist_map_inline:Nn \c__sjtu_uppercase_greek_clist
509   {
510     \cs_set_eq:cc { up ##1 } { ##1 }
511     \cs_set_eq:cc { it ##1 } { var ##1 }
512   }
513   \bool_if:NT \g__sjtu_slanted_uppercase_greek_bool
514   {
515     \clist_map_inline:Nn \c__sjtu_uppercase_greek_clist
516     { \cs_set_eq:cc { ##1 } { it ##1 } }
517   }
518 }
```

`__sjtu_set_unimath_symbol:`

```
519 \cs_new_protected:Nn \__sjtu_set_unimath_symbol:
520 {
521   \clist_map_inline:nn
522   {
523     { increment } { upDelta } ,
524     { QED } { blacksquare }
525   }
526   { \__sjtu_cs_provide_eq:cc ##1 }
527 }
```

如果没有指定数学字体, 则根据西文字体设置匹配的数字字体。

```
528 \tl_if_empty:NT \g__sjtu_math_font_tl
529 { \tl_gset_eq:NN \g__sjtu_math_font_tl \g__sjtu_text_font_tl }
```

根据操作系统判断默认 CJK 字体配置。

```
530 \tl_if_empty:NT \g__sjtu_cjk_font_tl
531 {
532   \sys_if_platform_windows:TF
```

```

533     { \tl_gset:Nn \g__sjtu_cjk_font_tl { windows } }
534     {
535       \ctex_if_platform_macos:TF
536       { \tl_gset:Nn \g__sjtu_cjk_font_tl { mac } }
537       { \tl_gset:Nn \g__sjtu_cjk_font_tl { fandol } }
538     }
539   }

```

`__sjtu_load_font:nn` 如果字体配置文件不存在,则载入默认值,并给出警告。
`__sjtu_load_fontset:`

```

540 \cs_new_protected:Npn \__sjtu_load_font:nn #1#2
541 {
542   \str_if_eq:eeF { \tl_use:c { g__sjtu_ #1 _font_tl } } { none }
543   {
544     \file_if_exist:nF
545     { sjtu- #1 -font- \tl_use:c { g__sjtu_ #1 _font_tl } .def }
546     {
547       \msg_warning:nnnn { sjtutex } { invalid-font } {#1} {#2}
548       \tl_gset:cn { g__sjtu_ #1 _font_tl } {#2}
549     }
550     \ctex_file_input:n
551     { sjtu- #1 -font- \tl_use:c { g__sjtu_ #1 _font_tl } .def }
552   }
553 }
554 \msg_new:nnn { sjtutex } { invalid-font }
555 {
556   Invalid~ value~ `#1-font~ =~ \tl_use:c { g__sjtu_ #1 _font_tl }~ '!\ \\\
557   Using~ `#2'~ instead.
558 }
559 \cs_new_protected:Nn \__sjtu_load_fontset:
560 {
561   \clist_map_inline:nn
562   {
563     { math } { newtx },
564     { text } { newtx },
565     { cjk } { fandol }
566   }
567   { \__sjtu_load_font:nn ##1 }
568 }
569 \@onlypreamble \__sjtu_load_font:nn
570 \@onlypreamble \__sjtu_load_fontset:
571 </class>

```

6.6.1 西文与数学字体

```

572 <*font&(math|text)>
573 <*stixtwo>
574 \__sjtu_fontset_case:nn
575 {
576 <*math>
577   \DeclareSizeFunction { sub } { \sub@sfcnt \@font@info }
578   \PassOptionsToPackage { notext } { stix2 }
579   \RequirePackage { stix2 }
580   \clist_map_inline:nn
581   {
582     \upalpha      { "0B } ,
583     \upbeta       { "0C } ,
584     \upgamma      { "0D } ,
585     \updelta      { "0E } ,
586     \upepsilon    { "0F } ,
587     \upzeta       { "10 } ,
588     \upeta        { "11 } ,
589     \uptheta      { "12 } ,
590     \upiota       { "13 } ,
591     \upkappa      { "14 } ,
592     \uplambda     { "15 } ,
593     \upmu         { "16 } ,

```

```

594     \upnu      { "17 } ,
595     \upxi     { "18 } ,
596     \uppi     { "19 } ,
597     \uprho    { "1A } ,
598     \upsigma  { "1B } ,
599     \uptau    { "1C } ,
600     \upupsilon { "1D } ,
601     \upphi    { "1E } ,
602     \upchi    { "1F } ,
603     \uppsi    { "20 } ,
604     \upomega  { "21 } ,
605     \upvarepsilon { "22 } ,
606     \upvartheta { "23 } ,
607     \upvarpi  { "24 } ,
608     \upvarrho  { "25 } ,
609     \upvarsigma { "26 } ,
610     \upvarphi  { "27 }
611   }
612   { \_sjtu_declare_math_symbol:nnNn { \stix@lcgc } { operators } #1 }
613   \_sjtu_set_slanted_greek:
614 </math>
615 <*text>
616   \tl_set:Nn \encodingdefault { T1 }
617   \DeclareEncodingSubset { TS1 } { ? } { 0 }
618   \UndeclareTextCommand { \textpertenthousand } { T1 }
619   \DeclareTextSymbolDefault { \textpertenthousand } { TS1 }
620   \tl_set:Nn \rmdefault { stix2 }
621   \tl_set:Nn \qhv@scale { 0.94 }
622   \tl_set:Nn \sfdefault { qhv }
623   \tl_set:Nn \ttdefault { qcr }
624 </text>
625 }
626 {
627 <*math>
628   \RequirePackage { unicode-math }
629   \bool_if:NTF \g__sjtu_upright_integral_bool
630     {
631     \setmathfont { STIXTwoMath-Regular.otf }
632       [ StylisticSet = 8 ]
633     }
634     { \setmathfont { STIXTwoMath-Regular.otf } }
635   \setmathfont { STIXTwoMath-Regular.otf }
636     [
637     range = { scr, bfscr },
638     StylisticSet = 1
639     ]
640 </math>
641 <math> \setmathrm
642 <text> \setmainfont
643     { STIXTwoText }
644     [
645     Extension = .otf,
646     UprightFont = *-Regular,
647     BoldFont = *-Bold,
648     ItalicFont = *-Italic,
649     BoldItalicFont = *-BoldItalic
650     ]
651 </stixtwo>
652 <*xits>
653 \_sjtu_fontset_case:nn
654 <math> { \_sjtu_fontset_error:nn { math } { xits } }
655 <text> { \_sjtu_fontset_error:nn { text } { xits } }
656 {
657 <*math>
658   \RequirePackage { unicode-math }
659   \bool_if:NTF \g__sjtu_upright_integral_bool
660     {

```

```

661     \setmathfont { XITSMath-Regular }
662     [
663         Extension    = .otf,
664         BoldFont     = XITSMath-Bold,
665         StylisticSet = 8
666     ]
667 }
668 {
669     \setmathfont { XITSMath-Regular }
670     [
671         Extension    = .otf,
672         BoldFont     = XITSMath-Bold,
673     ]
674 }
675 \setmathfont { XITSMath-Regular.otf }
676 [
677     range          = { cal, bfcalf },
678     StylisticSet = 1
679 ]
680 </math>
<math> 681     \setmathrm
<text> 682     \setmainfont
683     { XITS }
684     [
685         Extension    = .otf,
686         UprightFont  = *-Regular,
687         BoldFont     = *-Bold,
688         ItalicFont   = *-Italic,
689         BoldItalicFont = *-BoldItalic
690     ]
691 </xits>
692 <*newtx|newpx>
693 <*math>
694 \tl_set_eq:NN \l__sjtu_save_encodingdefault_tl \encodingdefault
695 \tl_set_eq:NN \l__sjtu_save_rmdefault_tl \rmdefault
696 \tl_set_eq:NN \l__sjtu_save_sfdefault_tl \sfdefault
697 \tl_set_eq:NN \l__sjtu_save_ttdefault_tl \ttdefault
698 \tl_set:Nn \encodingdefault { OT1 }
<newtx> 699 \tl_set:Nn \rmdefault { ntxtlf }
<newpx> 700 \tl_set:Nn \rmdefault { zplTLF }
701 \tl_set:Nn \qhv@scale { 0.94 }
702 \tl_set:Nn \sfdefault { qhv }
703 \tl_set:Nn \ttdefault { qcr }
<newtx> 704 \RequirePackage { newtxmath }
<newpx> 705 \RequirePackage { newpxmath }
706 \tl_set_eq:NN \encodingdefault \l__sjtu_save_encodingdefault_tl
707 \tl_set_eq:NN \rmdefault \l__sjtu_save_rmdefault_tl
708 \tl_set_eq:NN \sfdefault \l__sjtu_save_sfdefault_tl
709 \tl_set_eq:NN \ttdefault \l__sjtu_save_ttdefault_tl
710 \__sjtu_set_unimath_symbol:
711 </math>
712 <*text>
713 \__sjtu_fontset_case:nn
714 {
715     \tl_set:Nn \encodingdefault { T1 }
<newtx> 716 \RequirePackage { newtxtext }
<newpx> 717 \RequirePackage { newpxtext }
718 \tl_set:Nn \ttdefault { qcr }
719 }
720 {
721     \setmainfont
<newtx> 722     { TeXGyreTermesX }
<newpx> 723     { TeXGyrePagellaX }
724     [
725         Extension    = .otf,
726         UprightFont  = *-Regular,
727         BoldFont     = *-Bold,

```

```

728     ItalicFont      = *-Italic,
729     BoldItalicFont = *-BoldItalic
730   ]
731 </text>
732 </newtx|newpx>
733 <*text&(newtx|newpx)|stixtwo|xits>
<math> 734     \setmathsf
<text> 735     \setsansfont
736     { texgyreheros }
737     [
738     Extension      = .otf,
739     UprightFont    = *-regular,
740     BoldFont       = *-bold,
741     ItalicFont     = *-italic,
742     BoldItalicFont = *-bolditalic,
743     Scale          = 0.94,
744     ]
<math> 745     \setmathhtt
<text> 746     \setmonofont
747     { texgyrecursor }
748     [
749     Extension      = .otf,
750     UprightFont    = *-regular,
751     BoldFont       = *-bold,
752     ItalicFont     = *-italic,
753     BoldItalicFont = *-bolditalic,
754     Ligatures      = CommonOff
755     ]
756   }
757 </text&(newtx|newpx)|stixtwo|xits>
758 <*lm>
759 <*text>
760 \_sjtu_fontset_case:nn
761 {
762   \tl_set:Nn \encodingdefault { T1 }
763   \tl_set:Nn \rmdefault { lmr }
764   \tl_set:Nn \sfdefault { lmss }
765   \tl_set:Nn \ttdefault { lmtt }
766 } { }
767 </text>
768 <*math>
769 \RequirePackage { amssymb, upgreek }
770 \SetSymbolFont { operators } { normal } { OT1 } { lmr } { m } { n }
771 \SetSymbolFont { letters } { normal } { OML } { lmm } { m } { it }
772 \SetSymbolFont { symbols } { normal } { OMS } { lmsy } { m } { n }
773 \SetSymbolFont { largesymbols } { normal } { OMX } { lmex } { m } { n }
774 \SetSymbolFont { operators } { bold } { OT1 } { lmr } { bx } { n }
775 \SetSymbolFont { letters } { bold } { OML } { lmm } { b } { it }
776 \SetSymbolFont { symbols } { bold } { OMS } { lmsy } { b } { n }
777 \SetSymbolFont { largesymbols } { bold } { OMX } { lmex } { m } { n }
778 \SetMathAlphabet { \mathbf } { normal } { OT1 } { lmr } { bx } { n }
779 \SetMathAlphabet { \mathsf } { normal } { OT1 } { lmss } { m } { n }
780 \SetMathAlphabet { \mathit } { normal } { OT1 } { lmr } { m } { it }
781 \SetMathAlphabet { \mathtt } { normal } { OT1 } { lmtt } { m } { n }
782 \SetMathAlphabet { \mathbf } { bold } { OT1 } { lmr } { bx } { n }
783 \SetMathAlphabet { \mathsf } { bold } { OT1 } { lmss } { m } { n }
784 \SetMathAlphabet { \mathit } { bold } { OT1 } { lmr } { bx } { it }
785 \SetMathAlphabet { \mathtt } { bold } { OT1 } { lmtt } { m } { n }
786 \bool_if:NT \g__sjtu_upright_integral_bool
787 { \RequirePackage { cmupint } }
788 \_sjtu_set_slanted_greek:
789 \_sjtu_set_unimath_symbol:
790 </math>
791 </lm>
792 <*libertinus>
793 \_sjtu_fontset_case:nn
794 {

```

```

795 <*text>
796   \tl_set:Nn \encodingdefault { T1 }
797   \tl_set:Nn \rmdefault { LibertinusSerif-TLF }
798   \tl_set:Nn \sfdefault { LibertinusSans-TLF }
799   \tl_set:Nn \ttdefault { lmtt }
800 </text>
801 <*math>
802   \exp_args:No \PassOptionsToPackage
803     { \g__sjtu_math_font_options_clist } { libertinust1math }
804   \RequirePackage { libertinust1math }
805 </math>
806 }
807 {
808 <*math>
809   \RequirePackage { unicode-math }
810   \bool_if:NTF \g__sjtu_upright_integral_bool
811     { \setmathfont { LibertinusMath-Regular.otf } }
812     {
813       \setmathfont { LibertinusMath-Regular.otf }
814       [ StylisticSet = 8 ]
815     }
816   \setmathfont { latinmodern-math.otf } [ range = \checkmark ]
817 </math>
<math> 818   \setmathrm
<text> 819   \setmainfont
820     { LibertinusSerif }
821     [
822       Extension           = .otf,
823       UprightFont         = *-Regular,
824       BoldFont            = *-Bold,
825       ItalicFont          = *-Italic,
826       BoldItalicFont      = *-BoldItalic,
827       SlantedFont         = *-Regular,
828       BoldSlantedFont     = *-Bold,
829       SlantedFeatures     = { FakeSlant = 0.2 },
830       BoldSlantedFeatures = { FakeSlant = 0.2 }
831     ]
<math> 832   \setmathsf
<text> 833   \setsansfont
834     { LibertinusSans }
835     [
836       Extension           = .otf,
837       UprightFont         = *-Regular,
838       BoldFont            = *-Bold,
839       ItalicFont          = *-Italic,
840       BoldItalicFont      = *-Italic,
841       BoldItalicFeatures  = { FakeBold = 3 },
842       SlantedFont         = *-Regular,
843       BoldSlantedFont     = *-Bold,
844       SlantedFeatures     = { FakeSlant = 0.2 },
845       BoldSlantedFeatures = { FakeSlant = 0.2 }
846     ]
847   }
848 </libertinus>
849 <*times>
850 <*math>
851 \PassOptionsToPackage { Symbol } { upgreek }
852 \RequirePackage { amssymb, upgreek }
853 \tl_set_eq:NN \l__sjtu_save_rmdefault_tl \rmdefault
854 \RequirePackage { mathptmx }
855 \tl_set_eq:NN \rmdefault \l__sjtu_save_rmdefault_tl
856 \tl_set:Nn \Hv@scale { 0.94 }
857 \DeclareMathAlphabet { \mathsf } { OT1 } { phv } { m } { n }
858 \DeclareMathAlphabet { \mathtt } { OT1 } { pcr } { m } { n }
859 \SetMathAlphabet { \mathsf } { bold } { OT1 } { phv } { b } { n }
860 \SetMathAlphabet { \mathtt } { bold } { OT1 } { pcr } { b } { n }
861 \DeclareSymbolFont { SJTU@ptm } { OML } { ptmcm } { m } { it }

```

```

862 \_sjtu_declare_math_symbol:nnNn { \mathord } { SJTU@ptm } \upvarsigma { "26 }
863 \bool_if:NT \g__sjtu_upright_integral_bool
864   { \RequirePackage { cmupint } }
865 \_sjtu_set_unimath_symbol:
866 </math>
867 < *text>
868 \_sjtu_fontset_case:nn
869   {
870     \tl_set:Nn \encodingdefault { T1 }
871     \tl_set:Nn \rmdefault { ptm }
872     \tl_set:Nn \Hv@scale { 0.94 }
873     \tl_set:Nn \sfdefault { phv }
874     \tl_set:Nn \ttdefault { pcr }
875   }
876   {
877     \setmainfont { Times~New~Roman } [ Ligatures = Rare ]
878     \setsansfont { Arial } [ Scale = 0.94 ]
879     \setmonofont { Courier~New }
880   }
881 </text>
882 </times>
883 < *newcm>
884 \_sjtu_fontset_case:nn
885 <math> { \_sjtu_fontset_error:nn { math } { newcm } }
886 <text> { \_sjtu_fontset_error:nn { text } { newcm } }
887   {
888 < *math>
889     \RequirePackage { unicode-math }
890     \bool_if:NTF \g__sjtu_upright_integral_bool
891       {
892         \setmathfont { NewCMMath-Book.otf }
893           [ StylisticSet = 2 ]
894       }
895     { \setmathfont { NewCMMath-Book.otf } }
896     \setmathfont { NewCMMath-Book.otf }
897       [
898         range          = { scr, bfscr },
899         StylisticSet = 1
900       ]
901 </math>
902 <math> \setmathrm
903 <text> \setmainfont
904   { NewCM10 }
905   [
906     Extension      = .otf,
907     SizeFeatures =
908     {
909       {
910         Size          = -9,
911         Font          = NewCM08-Book,
912         ItalicFont    = NewCM08-BookItalic,
913         SlantedFont   = NewCM08-Book,
914       },
915       { Size          = 9- }
916     },
917     UprightFont      = *-Book,
918     BoldFont         = *-Bold,
919     ItalicFont       = *-BookItalic,
920     BoldItalicFont   = *-BoldItalic,
921     SlantedFont      = *-Book,
922     SlantedFeatures  = { FakeSlant = 0.25 },
923     BoldSlantedFont  = *-Bold,
924     BoldSlantedFeatures = { FakeSlant = 0.25 }
925   ]
926 <math> \setmathsf
927 <text> \setsansfont
928   { NewCMSans10 }

```

```

929     [
930     Extension      = .otf,
931     SizeFeatures =
932     {
933     {
934         Size      = -9,
935         Font      = NewCMSans08-Book,
936         ItalicFont = NewCMSans08-BookOblique,
937     },
938     { Size      = 9- }
939     },
940     UprightFont    = *-Book,
941     BoldFont      = *-Bold,
942     ItalicFont     = *-BookOblique,
943     BoldItalicFont = *-BoldOblique
944 ]
<math>\setmathtt</math>
<text>\setmonofont
945     { NewCMMono10 }
946     [
947     Extension      = .otf,
948     UprightFont    = *-Book,
949     BoldFont      = *-Bold,
950     ItalicFont     = *-BookItalic,
951     BoldItalicFont = *-BoldOblique,
952     SlantedFont    = *-Book,
953     SlantedFeatures = { FakeSlant = 0.25 },
954     BoldSlantedFont = *-Bold,
955     BoldSlantedFeatures = { FakeSlant = 0.25 }
956     ]
957 ]
958 }
959 </newcm>
960 <*cambria>
961 \_sjtu_fontset_case:nn
<math>\_sjtu_fontset_error:nn { math } { cambria } }</math>
<text>\_sjtu_fontset_error:nn { text } { cambria } }</text>
962 {
963 <*math>
964     \RequirePackage { unicode-math }
965     \setmathfont { Cambria~Math }
966     \setmathrm { Cambria }
967     \setmathsf { Calibri }
968     \setmathtt { Consolas } [ Scale = 0.95 ]
969 </math>
970 <*text>
971     \setmainfont { Cambria }
972     \setsansfont { Calibri }
973     \setmonofont { Consolas } [ Scale = 0.95 ]
974 </text>
975 }
976 </cambria>
977 </font&{math|text}>

```

unicode-math 宏包设置。

```

981 <*class>
982 \ctex_at_end_package:nn { unicode-math }
983 {
984     \DeclareDocumentCommand \bm { m }
985     { { \sympbf {#1} } }
986     \DeclareDocumentCommand \boldsymbol { m }
987     { { \sympbf {#1} } }
988     \bool_if:NTF \g__sjtu_slanted_uppercase_greek_bool
989     { \keys_set:nn { unicode-math } { math-style = ISO } }
990     { \keys_set:nn { unicode-math } { math-style = TeX } }
991     \bool_if:NTF \g__sjtu_integral_limits_bool
992     { \removenolimits } { \addnolimits }
993     {

```



```

994     \int\iint\iiint\iiiiint\oint\oiint\oiint
995     \intclockwise\varointclockwise\ointctrlockwise\sumint
996     \intbar\intBar\find\cirfnint\awint\rppolint
997     \scpolint\mpolint\pointint\sqint\intlarhk\intx
998     \intcap\intcup\upint\lowint
999   }
1000 }

```

若未使用 `unicode-math` 配置数学字体, 则自动调用 `bm`。

```

1001 \ctex_at_end_preamble:n
1002 {
1003   \@ifpackageloaded { unicode-math }
1004   { } { \RequirePackage { bm } }
1005 }
1006 </class>

```

6.6.2 CJK 字体

在字体未提供对应粗体的情况下, 允许使用伪粗。

```

1007 <*font&cjk>
1008 <*windows>
1009 <*und>
1010 \tl_if_eq:NNTF \g__sjtu_lang_tl \c__sjtu_lang_ja_tl
1011   { \ctex_file_input:n { sjtu-cjk-font-windows-ja.def } }
1012   { \ctex_file_input:n { sjtu-cjk-font-windows-zh.def } }
1013 </und>
1014 <*zhja>
1015 \__sjtu_fontset_case:nn
1016 <*zh>
1017 {
1018   \ctex_load_zhmap:nnnn { zhsong } { zhhei } { zhfs } { windows }
1019   \ctex_punct_set:n { windows }
1020   \ctex_punct_map_family:nn { \CJKrmdefault } { zhsong }
1021   \ctex_punct_map_bfseries:nn { \CJKrmdefault } { zhhei }
1022   \ctex_punct_map_itshape:nn { \CJKrmdefault } { zhkai }
1023 }
1024 </zh>
<ja> 1025 { \__sjtu_fontset_error:nn { cjk } { windows } }
1026 {
1027 <*zh>
1028   \setCJKmainfont { SimSun }
1029   [ AutoFakeBold = 3 , ItalicFont = KaiTi ]
1030   \setCJKsansfont { SimHei } [ AutoFakeBold = 3 ]
1031   \setCJKmonofont { FangSong }
1032 </zh>
1033 <*ja>
1034   \setCJKmainfont { MS~Mincho } [ AutoFakeBold = 3 ]
1035   \setCJKsansfont { MS~Gothic } [ AutoFakeBold = 3 ]
1036   \setCJKmonofont { MS~Mincho }
1037   \setCJKfamilyfont { jamin } { MS~Mincho } [ AutoFakeBold = 3 ]
1038   \setCJKfamilyfont { jagoth } { MS~Gothic } [ AutoFakeBold = 3 ]
1039 </ja>
1040   \setCJKfamilyfont { zhsong } { SimSun }
1041   [ AutoFakeBold = 3 , ItalicFont = KaiTi ]
1042   \setCJKfamilyfont { zhhei } { SimHei } [ AutoFakeBold = 3 ]
1043   \setCJKfamilyfont { zhkai } { KaiTi }
1044   \setCJKfamilyfont { zhfs } { FangSong }
1045 }
1046 </zhja>
1047 </windows>
1048 <*mac>
1049 <*und>
1050 \tl_if_eq:NNTF \g__sjtu_lang_tl \c__sjtu_lang_ja_tl
1051   { \ctex_file_input:n { sjtu-cjk-font-mac-ja.def } }
1052   { \ctex_file_input:n { sjtu-cjk-font-mac-zh.def } }
1053 </und>
1054 <*zhja>

```

```

<zh> 1055 \_sjtu_fontset_case:nnn
<ja> 1056 \_sjtu_fontset_case:nn
1057 { \_sjtu_fontset_error:nn { cjk } { mac } }
1058 <*zh>
1059 {
1060   \ctex_load_zhmap:nnnn { zhsong } { zhhei } { zhfs } { mac }
1061   \ctex_punct_set:n { mac }
1062   \ctex_punct_map_family:nn { \CJKrmddefault } { zhsong }
1063   \ctex_punct_map_family:nn { \CJKsfdefault } { zhpf }
1064   \ctex_punct_map_bfseries:nn { \CJKrmddefault } { zhpf }
1065   \ctex_punct_map_itshape:nn { \CJKrmddefault } { zhkai }
1066 }
1067 </zh>
1068 {
1069 <*zh>
1070   \setCJKmainfont { Songti~SC }
1071   [
1072     UprightFont = *~Light ,
1073     BoldFont    = *~Bold ,
1074     ItalicFont  = Kaiti~SC~Regular ,
1075     BoldItalicFont = Kaiti~SC~Bold
1076   ]
1077   \setCJKsansfont { Heiti~SC }
1078   [
1079     UprightFont = *~Medium ,
1080     AutoFakeBold = 3
1081   ]
1082   \setCJKmonofont { STFangsong }
1083 </zh>
1084 <*ja>
1085   \setCJKmainfont { HiraMinProN }
1086   [
1087     UprightFont = *-W3 ,
1088     BoldFont    = *-W6
1089   ]
1090   \setCJKsansfont { HiraKakuProN }
1091   [
1092     UprightFont = *-W3 ,
1093     BoldFont    = *-W6
1094   ]
1095   \setCJKmonofont { HiraMinProN-W3 }
1096   \setCJKfamilyfont { jamin } { HiraMinProN }
1097   [
1098     UprightFont = *-W3 ,
1099     BoldFont    = *-W6
1100   ]
1101   \setCJKfamilyfont { jagoth } { HiraKakuProN }
1102   [
1103     UprightFont = *-W3 ,
1104     BoldFont    = *-W6
1105   ]
1106 </ja>
1107   \setCJKfamilyfont { zhsong } { Songti~SC }
1108   [
1109     UprightFont = *~Light ,
1110     BoldFont    = *~Bold ,
1111     ItalicFont  = Kaiti~SC~Regular ,
1112     BoldItalicFont = Kaiti~SC~Bold
1113   ]
1114   \setCJKfamilyfont { zhhei } { Heiti~SC }
1115   [
1116     UprightFont = *~Medium ,
1117     AutoFakeBold = 3
1118   ]
1119   \setCJKfamilyfont { zhfs } { STFangsong }
1120   \setCJKfamilyfont { zhkai } { Kaiti~SC }
1121   [

```

```

1122     UprightFont    = *~Regular ,
1123     BoldFont      = *~Bold
1124 ]
1125 }
1126 </zh|ja>
1127 </mac>
1128 <*ubuntu>
1129 <*und>
1130 \tl_if_eq:NNTF \g__sjtu_lang_tl \c__sjtu_lang_ja_tl
1131 { \ctex_file_input:n { sjtu-cjk-font-ubuntu-ja.def } }
1132 { \ctex_file_input:n { sjtu-cjk-font-ubuntu-zh.def } }
1133 </und>
1134 <*zh|ja>
<zh> 1135 \__sjtu_fontset_case:nnn
<ja> 1136 \__sjtu_fontset_case:nn
1137 { \__sjtu_fontset_error:nn { cjk } { ubuntu } }
1138 <*zh>
1139 {
1140   \ctex_load_zhmap:nnnn { zhsong } { zhhei } { zhsong } { ubuntu }
1141   \ctex_punct_set:n { ubuntu }
1142   \ctex_punct_map_family:nn { \CJKrmdefault } { zhsong }
1143   \ctex_punct_map_bfseries:nn { \CJKrmdefault } { zhhei }
1144   \ctex_punct_map_itshape:nn { \CJKrmdefault } { zhkai }
1145 }
1146 </zh>
1147 {
1148 <*zh>
1149   \setCJKmainfont { Noto~Serif~CJK~SC }
1150   [
1151     UprightFont = *~Light ,
1152     BoldFont    = *~Bold ,
1153     ItalicFont  = AR~PL~KaitiM~GB
1154   ]
1155   \setCJKsansfont { Noto~Sans~CJK~SC }
1156   [
1157     UprightFont = *~Medium ,
1158     BoldFont    = *~Bold
1159   ]
1160   \setCJKmonofont { Noto~Serif~CJK~SC }
1161   [
1162     UprightFont = *~Light ,
1163     BoldFont    = *~Bold
1164   ]
1165 </zh>
1166 <*ja>
1167   \setCJKmainfont { Noto~Serif~CJK~JP }
1168   [
1169     UprightFont = *~Light ,
1170     BoldFont    = *~Bold
1171   ]
1172   \setCJKsansfont { Noto~Sans~CJK~JP }
1173   [
1174     UprightFont = *~Medium ,
1175     BoldFont    = *~Bold
1176   ]
1177   \setCJKmonofont { Noto~Serif~CJK~JP }
1178   [
1179     UprightFont = *~Light ,
1180     BoldFont    = *~Bold
1181   ]
1182   \setCJKfamilyfont { jamin } { Noto~Serif~CJK~JP }
1183   [
1184     UprightFont = *~Light ,
1185     BoldFont    = *~Bold
1186   ]
1187   \setCJKfamilyfont { jagoth } { Noto~Sans~CJK~JP }
1188   [

```

```

1189     UprightFont = *~Medium ,
1190     BoldFont    = *~Bold
1191 ]
1192 </ja>
1193 \setCJKfamilyfont { zhsong } { Noto~Serif~CJK~SC }
1194 [
1195     UprightFont = *~Light ,
1196     BoldFont    = *~Bold ,
1197     ItalicFont  = AR~PL~KaitiM~GB
1198 ]
1199 \setCJKfamilyfont { zhhei } { Noto~Sans~CJK~SC }
1200 [
1201     UprightFont = *~Medium ,
1202     BoldFont    = *~Bold
1203 ]
1204 \setCJKfamilyfont { zhkai } { AR~PL~KaitiM~GB }
1205 }
1206 </zhjja>
1207 </ubuntu>
1208 <*adobe>
1209 <*und>
1210 \tl_if_eq:NNTF \g__sjtu_lang_tl \c__sjtu_lang_ja_tl
1211 { \ctex_file_input:n { sjtu-cjk-font-adobe-ja.def } }
1212 { \ctex_file_input:n { sjtu-cjk-font-adobe-zh.def } }
1213 </und>
1214 <*zhjja>
<zh> 1215 \__sjtu_fontset_case:nnn
<ja> 1216 \__sjtu_fontset_case:nn
1217 { \__sjtu_fontset_error:nn { cjk } { adobe } }
1218 <*zh>
1219 {
1220     \ctex_load_zhmap:nnnn { zhsong } { zhhei } { zhfs } { adobe }
1221     \ctex_punct_set:n { adobe }
1222     \ctex_punct_map_family:nn { \CJKrmdefault } { zhsong }
1223     \ctex_punct_map_bfseries:nn { \CJKrmdefault } { zhhei }
1224     \ctex_punct_map_itshape:nn { \CJKrmdefault } { zhkai }
1225 }
1226 </zh>
1227 {
1228 <*zh>
1229     \setCJKmainfont { AdobeSongStd-Light }
1230     [ AutoFakeBold = 3 , ItalicFont = AdobeKaitiStd-Regular ]
1231     \setCJKsansfont { AdobeHeitiStd-Regular } [ AutoFakeBold = 3 ]
1232     \setCJKmonofont { AdobeFangsongStd-Regular }
1233 </zh>
1234 <*ja>
1235     \setCJKmainfont { KozMinPr6N }
1236     [
1237         UprightFont = *-Light ,
1238         BoldFont    = *-Bold
1239     ]
1240     \setCJKsansfont { KozGoPr6N }
1241     [
1242         UprightFont = *-Medium ,
1243         BoldFont    = *-Bold
1244     ]
1245     \setCJKmonofont { KozMinPr6N-Light }
1246     \setCJKfamilyfont { jamin } { KozMinPr6N }
1247     [
1248         UprightFont = *-Light ,
1249         BoldFont    = *-Bold
1250     ]
1251     \setCJKfamilyfont { jagoth } { KozGoPr6N }
1252     [
1253         UprightFont = *-Medium ,
1254         BoldFont    = *-Bold
1255     ]

```

```

1256 </ja>
1257 \setCJKfamilyfont { zhsong } { AdobeSongStd-Light }
1258 [ AutoFakeBold = 3 , ItalicFont = AdobeKaitiStd-Regular ]
1259 \setCJKfamilyfont { zhhei } { AdobeHeitiStd-Regular } [ AutoFakeBold = 3 ]
1260 \setCJKfamilyfont { zhfs } { AdobeFangsongStd-Regular }
1261 \setCJKfamilyfont { zhkai } { AdobeKaitiStd-Regular }
1262 }
1263 </zhja>
1264 </adobe>
1265 <*fandol>
1266 <*und>
1267 \tl_if_eq:NNTF \g__sjtu_lang_tl \c__sjtu_lang_ja_tl
1268 { \ctex_file_input:n { sjtu-cjk-font-fandol-ja.def } }
1269 { \ctex_file_input:n { sjtu-cjk-font-fandol-zh.def } }
1270 </und>
1271 <*zhja>
<zh> 1272 \__sjtu_fontset_case:nnn
<ja> 1273 \__sjtu_fontset_case:nn
1274 { \__sjtu_fontset_error:nn { cjk } { fandol } }
1275 <*zh>
1276 {
1277 \ctex_load_zhmap:nnnn { zhsong } { zhhei } { zhfs } { fandol }
1278 \ctex_punct_set:n { fandol }
1279 \ctex_punct_map_family:nn { \CJKrmdefault } { zhsong }
1280 \ctex_punct_map_bfseries:nn { \CJKrmdefault } { zhhei }
1281 \ctex_punct_map_itshape:nn { \CJKrmdefault } { zhkai }
1282 }
1283 </zh>
1284 {
1285 <*zh>
1286 \setCJKmainfont { FandolSong }
1287 [
1288 Extension = .otf ,
1289 UprightFont = *-Regular ,
1290 BoldFont = *-Bold ,
1291 ItalicFont = FandolKai-Regular
1292 ]
1293 \setCJKsansfont { FandolHei }
1294 [
1295 Extension = .otf ,
1296 UprightFont = *-Regular ,
1297 BoldFont = *-Bold
1298 ]
1299 \setCJKmonofont { FandolFang }
1300 [
1301 Extension = .otf ,
1302 UprightFont = *-Regular
1303 ]
1304 </zh>
1305 <*ja>
1306 \setCJKmainfont { HaranoAjiMincho }
1307 [
1308 Extension = .otf ,
1309 UprightFont = *-Regular ,
1310 BoldFont = *-Bold
1311 ]
1312 \setCJKsansfont { HaranoAjiGothic }
1313 [
1314 Extension = .otf ,
1315 UprightFont = *-Medium ,
1316 BoldFont = *-Bold
1317 ]
1318 \setCJKmonofont { HaranoAjiGothic }
1319 [
1320 Extension = .otf ,
1321 UprightFont = *-Regular
1322 ]

```

```

1323 \setCJKfamilyfont { jamin } { HaranoAjiMincho }
1324 [
1325   Extension = .otf ,
1326   UprightFont = *-Regular ,
1327   BoldFont = *-Bold
1328 ]
1329 \setCJKfamilyfont { jagoth } { HaranoAjiGothic }
1330 [
1331   Extension = .otf ,
1332   UprightFont = *-Medium ,
1333   BoldFont = *-Bold
1334 ]
1335 <ja>
1336 \setCJKfamilyfont { zhsong } { FandolSong }
1337 [
1338   Extension = .otf ,
1339   UprightFont = *-Regular ,
1340   BoldFont = *-Bold ,
1341   ItalicFont = FandolKai-Regular
1342 ]
1343 \setCJKfamilyfont { zhhei } { FandolHei }
1344 [
1345   Extension = .otf ,
1346   UprightFont = *-Regular,
1347   BoldFont = *-Bold
1348 ]
1349 \setCJKfamilyfont { zhfs } { FandolFang }
1350 [
1351   Extension = .otf ,
1352   UprightFont = *-Regular
1353 ]
1354 \setCJKfamilyfont { zhkai } { FandolKai }
1355 [
1356   Extension = .otf ,
1357   UprightFont = *-Regular
1358 ]
1359 }
1360 </zhjja>
1361 </fandol>
1362 <*founder>
1363 <*und>
1364 \tl_if_eq:NNTF \g__sjtu_lang_tl \c__sjtu_lang_ja_tl
1365 { \ctex_file_input:n { sjtu-cjk-font-founder-ja.def } }
1366 { \ctex_file_input:n { sjtu-cjk-font-founder-zh.def } }
1367 </und>
1368 <*zhjja>
1369 \__sjtu_fontset_case:nn
1370 <*zh>
1371 {
1372   \ctex_load_zhmap:nnnn { zhsong } { zhhei } { zhfs } { founder }
1373   \ctex_punct_set:n { founder }
1374   \ctex_punct_map_family:nn { \CJKrmdefault } { zhsong }
1375   \ctex_punct_map_bfseries:nn { \CJKrmdefault } { zhhei }
1376   \ctex_punct_map_itshape:nn { \CJKrmdefault } { zhkai }
1377 }
1378 </zh>
<ja> 1379 { \__sjtu_fontset_error:nn { cjk } { founder } }
1380 {
1381 <*zh>
1382   \setCJKmainfont { FZShuSong-Z01 }
1383   [ AutoFakeBold = 3 , ItalicFont = FZKai-Z03 ]
1384   \setCJKsansfont { FZHei-B01 } [ AutoFakeBold = 3 ]
1385   \setCJKmonofont { FZFangSong-Z02 }
1386 </zh>
1387 <*ja>
1388   \setCJKmainfont { ipam.ttf } [ AutoFakeBold = 3 ]
1389   \setCJKsansfont { ipag.ttf } [ AutoFakeBold = 3 ]

```

```

1390 \setCJKmonofont { ipag.ttf }
1391 \setCJKfamilyfont { jamin } { ipam.ttf } [ AutoFakeBold = 3 ]
1392 \setCJKfamilyfont { jagoth } { ipag.ttf } [ AutoFakeBold = 3 ]
1393 <ja>
1394 \setCJKfamilyfont { zhsong } { FZShuSong-Z01 }
1395 [ AutoFakeBold = 3 , ItalicFont = FZKai-Z03 ]
1396 \setCJKfamilyfont { zhhei } { FZHei-B01 } [ AutoFakeBold = 3 ]
1397 \setCJKfamilyfont { zhkai } { FZKai-Z03 }
1398 \setCJKfamilyfont { zhfs } { FZFangSong-Z02 }
1399 }
1400 </zhja>
1401 </founder>
1402 <*lund>
1403 \NewDocumentCommand \songti { } { \CJKfamily { zhsong } }
1404 \NewDocumentCommand \heiti { } { \CJKfamily { zhhei } }
<lubuntu> 1405 \NewDocumentCommand \fangsong { } { \CJKfamily { zhfs } }
1406 \NewDocumentCommand \kaishu { } { \CJKfamily { zhkai } }
<ja> 1407 \NewDocumentCommand \mincho { } { \CJKfamily { jamin } }
<ja> 1408 \NewDocumentCommand \gothic { } { \CJKfamily { jagoth } }
1409 </lund>
1410 </font&cjk>

```

\CJKrmfamily 只改变 CJK 字体族的命令。

```

\CJKsffamily
\CJKttfamily
1411 <*class>
1412 \NewDocumentCommand \CJKrmfamily { } { \CJKfamily { \CJKrmddefault } }
1413 \NewDocumentCommand \CJKsffamily { } { \CJKfamily { \CJKsfdefault } }
1414 \NewDocumentCommand \CJKttfamily { } { \CJKfamily { \CJKttdefault } }

```

带圈数字使用 CJK 字体。

```

1415 \_sjtu_unicode_engine_case:nn
1416 {
1417 \xeCJK_declare_char_class:nn { CJK }
1418 { "24EA, "2460->"2473, "3251->"32BF, "25A1 }
1419 }
1420 {
1421 \ltjdefcharrange { 99 }
1422 { "24EA, "2460-"2473, "3251-"32BF, "25A1 }
1423 \ltjsetparameter { jacharrange = { +99 } }
1424 }

```

载入字体配置。

```

1425 \_sjtu_load_fontset:

```

6.7 名称设置

定义 sjtu/name 键值类。

设置标准文档类中已定义的名称。

```

1426 \keys_define:nn { sjtu / name }
1427 {
1428 contents .meta:nn = { ctex } { contentsname = {#1} } ,
1429 listfigure .meta:nn = { ctex } { listfigurename = {#1} } ,
1430 listtable .meta:nn = { ctex } { listtablename = {#1} } ,
1431 figure .meta:nn = { ctex } { figurename = {#1} } ,
1432 table .meta:nn = { ctex } { tablename = {#1} } ,
<lthesis> 1433 abstract .meta:nn = { ctex } { abstractname = {#1} } ,
1434 index .meta:nn = { ctex } { indexname = {#1} } ,
1435 appendix .meta:nn = { ctex } { appendixname = {#1} } ,
1436 proof .meta:nn = { ctex } { proofname = {#1} } ,
1437 bib .meta:nn = { ctex } { bibname = {#1} } ,
1438 part .tl_set:N = \partname ,
<larticle> 1439 chapter .tl_set:N = \chaptername ,

```

标准文档类中未定义的名称。

```

1440 figure*      .tl_set:N = \SJTU@figurename@bi@second ,
1441 figure*      .initial:n = { 图 } ,
1442 table*       .tl_set:N = \SJTU@tablename@bi@second ,
1443 table*       .initial:n = { 表 } ,
1444 algorithm    .tl_set:N = \SJTU@algorithmname ,
1445 algorithm    .initial:n = { Algorithm } ,
1446 listalgorithm .tl_set:N = \SJTU@listalgorithmname ,
1447 listalgorithm .initial:n = { List~of~Algorithms } ,
1448 <*thesis>
1449 abbr        .tl_set:N = \SJTU@abbrname ,
1450 abbr        .initial:n = { Abbreviations } ,
1451 nom         .tl_set:N = \SJTU@nomname ,
1452 nom         .initial:n = { Nomenclature } ,
1453 ack        .tl_set:N = \SJTU@ackname ,
1454 ack        .initial:n = { Acknowledgements } ,
1455 resume     .tl_set:N = \SJTU@resumename ,
1456 resume     .initial:n = { Resume } ,
1457 digest     .tl_set:N = \SJTU@digestname ,
1458 digest     .initial:n = { Digest } ,
1459 achv       .tl_set:N = \SJTU@achvname ,
1460 achv       .initial:n = { List~of~Research~Achievements } ,
1461 </thesis>
1462 }
1463 </class>
1464 <*scheme>
1465 <*zh>
1466 \keys_set_known:nn { sjtu / name }
1467 {
1468   contents    = { 目 \protect \quad 录 } ,
1469   listfigure  = { 插 \protect \quad 图 } ,
1470   listtable   = { 表 \protect \quad 格 } ,
1471   figure      = { 图 } ,
1472   table       = { 表 } ,
1473   abstract    = { 摘 \protect \quad 要 } ,
1474   index       = { 索 \protect \quad 引 } ,
1475   appendix    = { 附录 } ,
1476   proof       = { 证明 } ,
1477   bib         = { 参考文献 } ,
1478   figure*     = { Figure } ,
1479   table*      = { Table } ,
1480   algorithm    = { 算法 } ,
1481   listalgorithm = { 算 \protect \quad 法 } ,
1482   abbr        = { 缩略语对照表 } ,
1483   nom         = { 符号对照表 } ,
1484   ack        = { 致 \protect \quad 谢 } ,
1485   resume     = { 个人简历 } ,
1486   digest     = { 大摘要 } ,
1487   achv       = { 学术论文和科研成果目录 }
1488 }
1489 </zh>
1490 <*de>
1491 \keys_set_known:nn { sjtu / name }
1492 {
1493   contents    = { Inhaltsverzeichnis } ,
1494   listfigure  = { Abbildungsverzeichnis } ,
1495   listtable   = { Tabellenverzeichnis } ,
1496   figure      = { Abbildung } ,
1497   table       = { Tabelle } ,
1498   abstract    = { Zusammenfassung } ,
1499   index       = { Index } ,
1500   appendix    = { Anhang } ,
1501   proof       = { Beweis } ,
1502   bib         = { Literaturverzeichnis } ,
1503   part        = { Teil } ,
1504   chapter     = { Kapitel } ,

```



```

1505 figure*      = { Figure          } ,
1506 table*       = { Table           } ,
1507 algorithm    = { Algorithmus     } ,
1508 listalgorithm = { Algorithmenverzeichnis } ,
1509 abbr         = { Abkürzungsverzeichnis } ,
1510 nom          = { Symbolverzeichnis } ,
1511 ack         = { Danksagungen     } ,
1512 resume      = { Lebenslauf       } ,
1513 digest      = { Kurzfassung      } ,
1514 achv       = { Forschungsleistungen }
1515 }
1516 </de>

1517 <*ja>
1518 \keys_set_known:nn { sjtu / name }
1519 {
1520 contents      = { 目 \protect \quad 次 } ,
1521 listfigure    = { 図目次           } ,
1522 listtable     = { 表目次           } ,
1523 figure       = { 図                 } ,
1524 table        = { 表                 } ,
1525 abstract     = { 概 \protect \quad 要 } ,
1526 index        = { 索 \protect \quad 引 } ,
1527 appendix     = { 付録             } ,
1528 proof        = { 证明             } ,
1529 bib          = { 参考文献         } ,
1530 figure*     = { Figure           } ,
1531 table*      = { Table            } ,
1532 algorithm    = { アルゴリズム     } ,
1533 listalgorithm = { アルゴリズム目次 } ,
1534 abbr        = { 略語表           } ,
1535 nom         = { 記号表           } ,
1536 ack         = { 謝 \protect \quad 辞 } ,
1537 resume      = { 履歴書           } ,
1538 digest      = { 要 \protect \quad 約 } ,
1539 achv       = { 研究業績書       }
1540 }
1541 </ja>
1542 </scheme>

```

载入名称配置。

```

1543 <*class>
1544 <*thesis>
1545 \clist_map_inline:Nn \g__sjtu_lang_clist
1546 { \file_input:n { sjtu-name-thesis- #1 .def } }
1547 \clist_map_inline:nn
1548 { title_page, declaration, abstract }
1549 { \__sjtu_define_name:nv {#1} { c__sjtu_name_ #1 _ \g__sjtu_lang_tl _tl } }
1550 </thesis>
</thesis> 1551 \file_input:n { sjtu-name-generic- \g__sjtu_lang_tl .def }

```

6.8 页面设置

利用 `geometry` 宏包设置页面边距以及页眉高度。

```

1552 \geometry
1553 {
1554 top          = 3.5 cm,
1555 bottom      = 4.0 cm,
1556 left        = 2.5 cm,
1557 right       = 2.5 cm,
</thesis> 1558 bindingoffset = 0.5 cm,
1559 headheight  = 1.5 cm,
1560 headsep     = 0.5 cm,
1561 footskip    = 1.0 cm
1562 }

```

学位论文页面纵向顶部对齐。

```
1563 <*thesis>
1564 \AtEndOfClass { \raggedbottom }
1565 </thesis>
```

6.9 页眉页脚

ctex 宏包使用 heading 选项后,会把页面格式设置为 headings。因此必须在 ctex 调用之后重新设置 \pagestyle 为 fancy。

```
1566 \pagestyle { fancy }
```

清除所有页眉页脚。

```
1567 \fancyhf { }
```

style/header-font 设置页眉页脚字体。
style/footer-font

```
1568 \keys_define:nn { sjtu / style }
1569 {
1570   header-font .tl_set:N = \l__sjtu_style_header_font_tl ,
<thesis> 1571   header-font .initial:n = \zihao { -5 } \setbaselineskip { 12 bp } ,
<!thesis> 1572   header-font .initial:n = \zihao { -5 } \sffamily ,
1573   footer-font .tl_set:N = \l__sjtu_style_footer_font_tl ,
<thesis> 1574   footer-font .initial:n = \zihao { -5 } \setbaselineskip { 12 bp }
<!thesis> 1575   footer-font .initial:n = \zihao { -5 }
1576 }
1577 \fancyheadinit { \l__sjtu_style_header_font_tl }
1578 \fancyfootinit { \l__sjtu_style_footer_font_tl }
```

style/header-uppercase 页眉西文是否大写。

```
\__sjtu_nouppercase:n
1579 \keys_define:nn { sjtu / style }
1580 {
1581   header-uppercase .choice: ,
1582   header-uppercase / true .code:n =
1583     { \cs_set_eq:NN \__sjtu_nouppercase:n \use:n } ,
1584   header-uppercase / false .code:n =
1585     { \cs_set:Nn \__sjtu_nouppercase:n { \nouppercase {##1} } } ,
1586   header-uppercase .default:n = { true } ,
1587   header-uppercase .initial:n = { false }
1588 }
1589 \cs_generate_variant:Nn \__sjtu_nouppercase:n { V }
```

style/page-number 页脚页码格式。

```
\__sjtu_page:n
1590 \cs_new:Nn \__sjtu_thepage: { \thepage }
1591 \keys_define:nn { sjtu / style }
1592 {
1593   page-number .cs_set:Np = \__sjtu_page:n #1 ,
1594   page-number .initial:n = { {#1} }
1595 }
```

设置页眉内容。

```
1596 \tl_set:Nn \l__sjtu_header_tl
1597 {
1598 <*thesis>
1599   {
1600     \__sjtu_set_cjk_default_zh: \normalfont
1601     \l__sjtu_info_subject_zh_tl
1602   }
1603 </thesis>
1604 <!thesis>
1605   \includegraphics [ height = 1.2 cm ]
1606     { sjtu-vi-logo-small-red.pdf }
1607 </!thesis>
1608 }
```

```

<thesis> 1609 \tl_set:Nn \l__sjtu_leftmark_tl { \leftmark }
<!thesis> 1610 \tl_set:Nn \l__sjtu_leftmark_tl { \l__sjtu_info_subject_tl }
1611 \tl_set:Nn \l__sjtu_rightmark_tl { \leftmark }

```

设置页眉页脚。

```

1612 \bool_if:NTF \g__sjtu_twoside_bool
1613 {
1614   \fancyhead [ LO, RE ] { \l__sjtu_header_tl }
1615   \fancyhead [ LE ]     { \__sjtu_nouppercase:V \l__sjtu_leftmark_tl }
1616   \fancyhead [ RO ]     { \__sjtu_nouppercase:V \l__sjtu_rightmark_tl }
1617 }
1618 {
1619   \fancyhead [ L ] { \l__sjtu_header_tl }
1620   \fancyhead [ R ] { \__sjtu_nouppercase:V \l__sjtu_rightmark_tl }
1621 }
1622 \fancyfoot [ C ] { \__sjtu_page:n { \__sjtu_thepage: } }

```

`\headrule` `sjtuthesis` 的页眉线。

```

1623 <*thesis>
1624 \cs_set:Npn \headrule
1625 {
1626   \hrule height 2.25 pt width \headwidth
1627   \skip_vertical:n { 0.75 pt }
1628   \hrule height 0.75 pt width \headwidth
1629   \skip_vertical:n { -3.75 pt }
1630 }
1631 </thesis>

```

重定义 `plain` 样式。

```

1632 <*!thesis>
1633 \bool_if:NTF \g__sjtu_twoside_bool
1634 {
1635   \fancypagestyle { plain }
1636   {
1637     \fancyhead [ LE, RO ] { }
1638     \tl_set:Nn \headrulewidth { 0 pt }
1639   }
1640 }
1641 {
1642   \fancypagestyle { plain }
1643   {
1644     \fancyhead [ R ] { }
1645     \tl_set:Nn \headrulewidth { 0 pt }
1646   }
1647 }
1648 </!thesis>

```

`SJTU@null` 样式, 不对当前页面样式做任何修改。

```

1649 \cs_new_eq:NN \ps@SJTU@null \prg_do_nothing:

```

`\cleardoublepage` 空白页清空页眉页脚。

```

1650 \RenewDocumentCommand \cleardoublepage { }
1651 {
1652   \clearpage
1653   \bool_if:NT \g__sjtu_twoside_bool
1654   {
1655     \int_if_odd:nF \c@page
1656     { \hbox:n { } \thispagestyle { empty } \newpage }
1657   }
1658 }

```

6.10 页码设置

文档初始页码编码设置。

```
<thesis> 1659 \pagenumbering { Alph }
```

`\frontmatter` 前置部分使用大写罗马数字编码。

```
1660 <*thesis>
1661 \RenewDocumentCommand \frontmatter { }
1662 {
1663   \cleardoublepage
1664   \@mainmatterfalse
1665   \pagenumbering { Roman }
1666 }
1667 </thesis>
```

6.11 章节标题结构

设置章节标题样式。

```
1668 <*!article>
1669 \ctex_set:nn { chapter }
1670 {
1671   pagestyle = SJTU@null ,
1672   fixskip = true ,
1673 <*thesis>
1674   beforekip = 27 bp ,
1675   afterkip = 27 bp ,
1676   format = \zihao { 3 } \setbaselineskip{ 20 bp } \bfseries
1677           \CJKsffamily \centering ,
1678 </thesis>
1679 <*report>
1680   beforekip = 30 pt ,
1681   afterkip = 24 pt ,
1682   format = \Large \bfseries \CJKsffamily \centering ,
1683 </report>
1684   nameformat = ,
1685   titleformat = ,
1686   lofskip = \c_zero_skip ,
1687   lotskip = \c_zero_skip ,
1688   aftername = \quad
1689 }
1690 </!article>
1691 </class>
1692 <*scheme&(zh|ja)>
1693 \keys_set_known:nn { ctex / chapter }
1694 { name = { 第 \space , \space 章 } }
1695 </scheme&(zh|ja)>
1696 <*class>
1697 \ctex_set:nn { section }
1698 <*thesis>
1699 {
1700   beforekip = 24 bp ,
1701   afterkip = 6 bp ,
1702   format = \zihao { 4 } \setbaselineskip { 18 bp } \bfseries
1703           \CJKsffamily
1704 }
1705 </thesis>
<!thesis> 1706 { format = \large \bfseries \CJKsffamily }
1707 \ctex_set:nn { subsection }
1708 <*thesis>
1709 {
1710   beforekip = 12 bp ,
1711   afterkip = 6 bp ,
1712   format = \zihao { -4 } \setbaselineskip { 16 bp } \bfseries
1713           \CJKsffamily
```

```

1714 }
1715 </thesis>
<!thesis> 1716 { format = \normalsize \bfseries \CJKsffamily }
1717 \ctex_set:nn { subsubsection }
1718 <*thesis>
1719 {
1720   beforeskip = 6 bp ,
1721   afterskip = 6 bp ,
1722   format = \zihao { -4 } \setbaselineskip { 16 bp } \normalfont
1723 }
1724 </thesis>
<!thesis> 1725 { format = \normalsize \normalfont }
1726 \ctex_set:n { secnumdepth = 3 }

```

style/indent-first 章节标题后首段是否缩进。

```

1727 \keys_define:nn { sjtu / style }
1728 {
1729   indent-first .choice: ,
1730   indent-first .choices:nn =
1731     { true, false }
1732     {
1733       \clist_map_inline:nn
1734         {
<article> 1735         part,
<!article> 1736         chapter,
1737         section, subsection, subsubsection,
1738         paragraph, subparagraph
1739       }
1740       { \ctex_set:nn {####1} { afterindent = #1 } }
1741     } ,
1742   indent-first .default:n = { true } ,
1743   indent-first .initial:n = { true }
1744 }

```

\SJTU@head 定义一个灵活的章节标题命令专门处理不同的需求。

```

\__sjtu_head_aux_s:nn 1745 \NewDocumentCommand \SJTU@head { s O{#3} m O{#2} }
\__sjtu_head_aux_s:nx 1746 {
\__sjtu_pdf_bookmark:nn <!article> 1747   \CTEX@chapter@break
\__sjtu_phantom_section: 1748   \IfBooleanTF {#1}
1749     { \tl_if_empty:nF {#4} { \__sjtu_pdf_bookmark:nn { 0 } {#4} } }
1750     {
1751       \__sjtu_phantom_section:
<!article> 1752       \addcontentsline { toc } { chapter } {#4}
<article> 1753       \addcontentsline { toc } { section } {#4}
1754     }
1755   \cs_set_eq:NN \__sjtu_orig_ctex_gettitle:n \CTEX@gettitle
1756   \cs_set:Npn \CTEX@gettitle ##1 { \__sjtu_orig_ctex_gettitle:n {#2} }
<!article> 1757   \chapter* {#3}
<article> 1758   \section* {#3}
1759   \cs_set_eq:NN \CTEX@gettitle \__sjtu_orig_ctex_gettitle:n
1760   \@mkboth { \MakeUppercase {#2} } { \MakeUppercase {#2} }
1761 }
1762 <*thesis>
1763 \cs_new:Npn \__sjtu_head_aux_s:nn #1#2
1764   { \SJTU@head* [#1] {#2} }
1765 \cs_generate_variant:Nn \__sjtu_head_aux_s:nn { nx }
1766 </thesis>
1767 \cs_new_eq:NN \__sjtu_pdf_bookmark:nn \use_none:nn
1768 \cs_new_eq:NN \__sjtu_phantom_section: \prg_do_nothing:
1769 </class>

```

6.12 段落

设置全文首行缩进。

```
1770 <*scheme>
```

```

1771 \ctex_if_autoindent_touched:F
<zh> 1772 { \ctex_set:n { autoindent = true } }
<en|de> 1773 { \ctex_set:n { autoindent = 1.5 em } }
<ja> 1774 { \ctex_set:n { autoindent = 1 } }

```

`\verse` 修改诗歌和引用环境的缩进。

```

\quotation
<zh|ja> 1775 \ctex_patch_cmd:Nnn \verse { -1.5em } { -2 \ccwd }
<zh|ja> 1776 \ctex_patch_cmd:Nnn \verse { 1.5em } { 2 \ccwd }
1777 \ctex_patch_cmd:Nnn \quotation { 1.5em } { \parindent }
1778 </scheme>

```

使用 `enumitem` 调整默认列表环境的间距。

```

1779 <*class>
1780 \setlist { nosep }

```

6.13 数学公式

`style/equation-font` 设置行间数学公式的字体。

```

1781 \keys_define:nn { sjtu / style }
1782 {
1783   equation-font .tl_set:N = \SJTU@style@equation@font ,
<thesis> 1784   equation-font .initial:x = \exp_not:N \linespread { }
<thesis> 1785   \exp_not:N \zihao { \g__sjtu_zihao_tl }
<!thesis> 1786   equation-font .initial:V = \c_empty_tl
1787 }

```

借用 `zhlineskip` 宏包的代码设置行间公式字体。

```

1788 \clist_map_inline:nn
1789 {
1790   array, matrix, pmatrix, bmatrix, Bmatrix, vmatrix, Vmatrix,
1791   matrix*, pmatrix*, bmatrix*, Bmatrix*, vmatrix*, Vmatrix*,
1792   cases, cases*, dcases, dcases*, rcases, rcases*, drcases, drcases*,
1793   aligned, alignedat, gathered, multlined, lgathered, rgathered
1794 }
1795 { \AtBeginEnvironment {#1} { \SJTU@style@equation@font } }
1796 \clist_map_inline:nn
1797 { \start@gather, \start@align, \start@multline }
1798 {
1799   \ctex_patch_cmd:Nnn #1
1800   { \collect@body }
1801   {
1802     \SJTU@style@equation@font
1803     \collect@body
1804   }
1805 }
1806 \ctex_patch_cmd:Nnn \gather@split
1807 { \spread@equation }
1808 {
1809   \SJTU@style@equation@font
1810   \spread@equation
1811 }

```

6.14 数学环境

可以选用 `amsthm` 或 `ntheorem` 宏包控制数学环境样式，并提供对证明环境 `proof` 的支持。

`style/theorem-header-font` 预定义的数学环境的定理头(即标题)以及定理内容的字体。

```

style/theorem-body-font
1812 \keys_define:nn { sjtu / style }
1813 {
1814   theorem-header-font .tl_set:N = \SJTU@style@thm@header@font ,

```

```

1815 theorem-header-font .initial:n = \bfseries \CJKsffamily ,
1816 theorem-body-font .tl_set:N = \SJTU@style@thm@body@font ,
1817 theorem-body-font .initial:n = \normalfont ,
1818 }

```

6.15 浮动体

下面这组命令使浮动对象的缺省值稍微宽松一点, 从而防止幅度对象占据过多的文本页面, 也可以防止在很大空白的浮动页上放置很小的图形。

```

1819 \tl_set:Nn \textfraction { 0.15 }
1820 \tl_set:Nn \topfraction { 0.85 }
1821 \tl_set:Nn \bottomfraction { 0.65 }
1822 \tl_set:Nn \floatpagefraction { 0.60 }

```

`style/float-font` 设置浮动体内的字体。

```

1823 \keys_define:nn { sjtu / style }
1824 {
1825   float-font .tl_set:N = \SJTU@style@float@font ,
<thesis> 1826   float-font .initial:n = \zihao { 5 } \setbaselineskip { 14 bp }
<!thesis> 1827   float-font .initial:n = \zihao { 5 }
1828 }
1829 \ctex_patch_cmd:Nnn \@floatboxreset
1830 { \normalsize } { \SJTU@style@float@font }

```

`style/caption-font` 题注格式。
`style/subcaption-font`

```

1831 \keys_define:nn { sjtu / style }
1832 {

```

`bicaption` 中双语标题之间的间距受 `caption` 字体定义 `normalsize` 的影响, 这里我们直接重定义 `normalsize`。

```

1833 caption-font .code:n =
1834 { \DeclareCaptionFont { normalsize } {#1} } ,
<thesis> 1835 caption-font .initial:n = \zihao { 5 } \setbaselineskip { 14 bp }
<thesis> 1836 \bfseries ,
<!thesis> 1837 caption-font .initial:n = \zihao { 5 } \bfseries ,
1838 subcaption-font .code:n =
1839 { \DeclareCaptionFont { SJTU@sub@font } {#1} } ,
<thesis> 1840 subcaption-font .initial:n = \zihao { 5 } \setbaselineskip { 14 bp }
<thesis> 1841 \normalfont
<!thesis> 1842 subcaption-font .initial:n = \zihao { 5 } \normalfont
1843 }
1844 \captionsetup
1845 {
1846   bi-slc = off ,
1847   labelsep = quad ,
<thesis> 1848   skip = 6 bp
1849 }
1850 \captionsetup [ sub ]
1851 {
1852   bi-slc = on ,
1853   font = SJTU@sub@font ,
1854   format = hang
1855 }

```

双语题注。

```

1856 \DeclareCaptionOption { bi-second-names } [ ]
1857 {
1858   \tl_set:Nn \figurename { \SJTU@figurename@bi@second }
1859   \tl_set:Nn \tablename { \SJTU@tablename@bi@second }
1860 }
1861 \captionsetup [ bi-second ] { bi-second-names }

```

```

style/num-sep 图、表、公式以及定理编号中的分隔符。
style/float-num-sep
style/equation-num-sep
style/theorem-num-sep
1862 \keys_define:nn { sjtu / style }
1863 {
1864   num-sep .code:n =
1865   {
1866     \tl_set:Nn \SJTU@style@fl@num@sep {#1}
1867     \tl_set:Nn \SJTU@style@eq@num@sep {#1}
1868     \tl_set:Nn \@thmcountersep {#1}
1869   } ,
1870   num-sep .initial:n = { . } ,
1871   float-num-sep .tl_set:N = \SJTU@style@fl@num@sep ,
1872   equation-num-sep .tl_set:N = \SJTU@style@eq@num@sep ,
1873   theorem-num-sep .tl_set:N = \@thmcountersep
1874 }

```

```

\SJTU@counterwithin 1875 \NewDocumentCommand \SJTU@counterwithin
1876 { s O{ \SJTU@style@fl@num@sep } O{ \arabic } m m }
1877 {
1878   \@ifbothcounters {#4} {#5}
1879   {
1880     \@addtoreset {#4} {#5}
1881     \IfBooleanF {#1}
1882     {
1883       \cs_gset:cpo { the #4 }
1884       { \cs:w the #5 \cs_end: #2 #3 {#4} }
1885     }
1886   }
1887 }

```

定义图、表、公式的编号格式。

```

1888 <*!article>
1889 \SJTU@counterwithin { figure } { chapter }
1890 \SJTU@counterwithin { table } { chapter }
1891 \SJTU@counterwithin [ \SJTU@style@eq@num@sep ] { equation } { chapter }
1892 </*!article>

```

\l_sjtu_counter_without_chapter_clist 大摘要中不需要随章编号的各计数器。

```

1893 <*thesis>
1894 \clist_set:Nn \l_sjtu_counter_without_chapter_clist
1895 { section, figure, table, equation }
1896 <*/thesis>

```

6.16 脚注

__sjtu_makefnmark_plain: 储存原始脚注相关命令。

```

\__sjtu_thefootnote_plain:
\__sjtu_thempfootnote_plain:
1897 \cs_set_eq:NN \__sjtu_makefnmark_plain: \@makefnmark
1898 \cs_set_eq:NN \__sjtu_thefootnote_plain: \thefootnote
1899 \cs_set_eq:NN \__sjtu_thempfootnote_plain: \thempfootnote

```

__sjtu_footnote_number:N 通过 Unicode 码位调用带圈数字。

```

1900 \cs_new:Npn \__sjtu_footnote_number:N #1
1901 {
1902   \int_compare:nNnTF {#1} < { 21 }
1903   { \__sjtu_unicode_char:n { \int_eval:n { "2460 - 1 + #1 } } }
1904   {
1905     \int_compare:nNnTF {#1} < { 36 }
1906     { \__sjtu_unicode_char:n { \int_eval:n { "3251 - 21 + #1 } } }
1907     {
1908       \int_compare:nNnTF {#1} < { 51 }
1909       { \__sjtu_unicode_char:n { \int_eval:n { "32B1 - 36 + #1 } } }
1910       { \msg_warning:nn { sjtutex } { too-many-footnotes } }
1911     }
1912   }

```



```

1913 }
1914 \msg_new:nnn { sjtutex } { too-many-footnotes }
1915 { Too~ many~ footnotes. }

```

`__sjtu_makefnmark_circled:` 重定义内部脚注文字命令, 使用带圈数字编号时, 脚注不使用上标。见 <https://www.zhihu.com/question/53030087>。

```

1916 \cs_new:Nn \__sjtu_makefnmark_circled: { \hbox:n { \@thefnmark } }

```

`style/fnmark-font` 脚注编号字体。

```

1917 \keys_define:nn { sjtu / style }
1918 {
1919   fnmark-font .choice: ,
1920   fnmark-font / haranoaji .code:n =
1921   {
1922     \__sjtu_engine_case:nn
1923     { \tl_set_eq:NN \l__sjtu_style_fnmark_font_tl \c_empty_tl }
1924     {
1925       \tl_set:Nn \l__sjtu_style_fnmark_font_tl
1926       {
1927         \CJKfontspec { HaranoAjiMincho }
1928         [
1929           Extension = .otf ,
1930           UprightFont = *-Regular ,
1931           BoldFont = *-Bold
1932         ]
1933       }
1934     }
1935   } ,
1936   fnmark-font / unknown .tl_set:N = \l__sjtu_style_fnmark_font_tl ,
1937   fnmark-font .initial:V = \c_empty_tl
1938 }

```

`__sjtu_thefootnote_circled:` 使用带圈数字编号脚注。

`__sjtu_thempfootnote_circled:`

```

1939 \cs_new:Nn \__sjtu_thefootnote_circled:
1940 { { \l__sjtu_style_fnmark_font_tl \__sjtu_footnote_number:N \c@footnote } }
1941 \cs_new:Nn \__sjtu_thempfootnote_circled:
1942 { { \l__sjtu_style_fnmark_font_tl \__sjtu_footnote_number:N \c@mpfootnote } }

```

`style/fnmark-style` 脚注编号样式。

```

1943 \keys_define:nn { sjtu / style }
1944 {
1945   fnmark-style .choice: ,
1946   fnmark-style / plain .code:n =
1947   {
1948     \cs_set_eq:NN \__sjtu_makefnmark: \__sjtu_makefnmark_plain:
1949     \cs_set_eq:NN \thefootnote \__sjtu_thefootnote_plain:
1950     \cs_set_eq:NN \thempfootnote \__sjtu_thempfootnote_plain:
1951   } ,
1952   fnmark-style / circled .code:n =
1953   {
1954     \cs_set_eq:NN \__sjtu_makefnmark: \__sjtu_makefnmark_circled:
1955     \cs_set_eq:NN \thefootnote \__sjtu_thefootnote_circled:
1956     \cs_set_eq:NN \thempfootnote \__sjtu_thempfootnote_circled:
1957   }
1958 }
1959 </class>
1960 <*scheme>
1961 \keys_set:nn { sjtu / style }
<zhja> 1962 { fnmark-style = circled }
<en/de> 1963 { fnmark-style = plain }
1964 </scheme>

```

在导言末尾修改 \@makefnmark，支持使用 footmisc 修改脚注格式。

```

1965 <*class>
1966 \ctex_at_end_preamble:n {
1967   \cs_set_eq:NN \__sjtu_orig_make_fnmark:n \@makefnmark
1968   \cs_set:Npn \@makefnmark #1
1969     {
1970       \group_begin:
1971         \cs_set_eq:NN \makefnmark \__sjtu_makefnmark:
1972         \__sjtu_orig_make_fnmark:n {#1}
1973       \group_end:
1974     }
1975 }

```

6.17 信息录入

__sjtu_info_keys_define:n 定义 sjththesis 不同语种 sjtu/info 键值类的辅助函数。

```

1976 <*thesis>
1977 \cs_new:Npn \__sjtu_info_keys_define:n #1
1978   {
1979     \clist_map_inline:nn
1980       {
1981         title, display_title, subject, author, date,
1982         supervisor, assoc_supervisor, department,
1983         co_supervisor, major, degree
1984       }
1985     { \tl_new:c { l__sjtu_info_ ##1 _ #1 _tl } }
1986     \clist_map_inline:nn
1987       { keywords, fund }
1988     { \clist_new:c { l__sjtu_info_ ##1 _ #1 _clist } }
1989     \keys_define:nn { sjtu }
1990       { info / #1 .meta:nn = { sjtu / info / #1 } {##1} }
1991     \keys_define:nn { sjtu / info }
1992       { #1 .meta:nn = { sjtu / info / #1 } {##1} }
1993     \keys_define:nn { sjtu / info / #1 }
1994       {
1995         title .code:n =
1996           {
1997             \tl_set:cn { l__sjtu_info_title_ #1 _tl } {##1}
1998             \tl_if_empty:cT { l__sjtu_info_display_title_ #1 _tl }
1999               { \tl_set:cn { l__sjtu_info_display_title_ #1 _tl } {##1} }
2000           } ,
2001         display-title .tl_set:c = l__sjtu_info_display_title_ #1 _tl ,
2002         subject .tl_set:c = l__sjtu_info_subject_ #1 _tl ,
2003         keywords .clist_set:c = l__sjtu_info_keywords_ #1 _clist ,
2004         author .tl_set:c = l__sjtu_info_author_ #1 _tl ,
2005         id .meta:nn = { sjtu / info } { id = {##1} } ,
2006         supervisor .tl_set:c = l__sjtu_info_supervisor_ #1 _tl ,
2007         assoc-supervisor .tl_set:c = l__sjtu_info_assoc_supervisor_ #1 _tl ,
2008         co-supervisor .tl_set:c = l__sjtu_info_co_supervisor_ #1 _tl ,
2009         degree .tl_set:c = l__sjtu_info_degree_ #1 _tl ,
2010         department .tl_set:c = l__sjtu_info_department_ #1 _tl ,
2011         major .tl_set:c = l__sjtu_info_major_ #1 _tl ,
2012         fund .clist_set:c = l__sjtu_info_fund_ #1 _clist ,
2013         date .meta:nn = { sjtu / info } { date = {##1} } ,
2014         display-date .tl_set:c = l__sjtu_info_date_ #1 _tl ,
2015       }
2016   }

```

\l__sjtu_info_id_zh_tl 单独处理学号。

```

2017 \tl_new:N \l__sjtu_info_id_zh_tl
2018 \keys_define:nn { sjtu / info }
2019   { id .tl_set:N = \l__sjtu_info_id_zh_tl }

```

\l__sjtu_info_supervisors_clist 标题中需要显示的导师列表。

```

2020 \clist_set:Nn \l__sjtu_info_supervisors_clist { supervisor }

```

盲审模式下隐藏作者、导师姓名等信息。

```

2021 \ctex_at_end_preamble:n
2022 {
2023   \bool_if:NT \g__sjtu_review_bool
2024   {
2025     \clist_map_inline:Nn \g__sjtu_lang_clist
2026     {
2027       \clist_map_inline:nn
2028       { author, supervisor, assoc_supervisor, co_supervisor }
2029       { \tl_clear:c { l__sjtu_info_ ##1 _ #1 _tl } }
2030       \clist_clear:c { l__sjtu_info_fund_ #1 _clist }
2031     }
2032     \tl_clear:N \l__sjtu_info_id_zh_tl
2033   }
2034 }
2035 </thesis>
2036 </class>

<lang&thesis&zh> 2037 \__sjtu_info_keys_define:n { zh }
<lang&thesis&en> 2038 \__sjtu_info_keys_define:n { en }
<lang&thesis&de> 2039 \__sjtu_info_keys_define:n { de }
<lang&thesis&ja> 2040 \__sjtu_info_keys_define:n { ja }

\l__sjtu_info_subject_tl 2041 <*class&lthesis>
\l__sjtu_info_keywords_clist 2042 \tl_new:N \l__sjtu_info_subject_tl
2043 \clist_new:N \l__sjtu_info_keywords_clist
2044 \keys_define:nn { sjtu / info }
2045 {
2046   title          .tl_set:N = \@title ,
2047   author         .tl_set:N = \@author ,
2048   display-date   .tl_set:N = \@date ,
2049   subject        .tl_set:N = \l__sjtu_info_subject_tl ,
2050   keywords       .clist_set:N = \l__sjtu_info_keywords_clist ,
2051 }
2052 </class&lthesis>

```

6.18 多语言支持

初始化主题。

```

2053 <*lang>
2054 <*thesis>
<zh> 2055 \keys_define:nn { sjtu / info / zh }
<en> 2056 \keys_define:nn { sjtu / info / en }
<de> 2057 \keys_define:nn { sjtu / info / de }
<ja> 2058 \keys_define:nn { sjtu / info / ja }
2059 {
2060   subject          .initial:x =
2061   {
2062 <*zh>
2063     \exp_not:V \c__sjtu_name_univ_zh_tl
2064     \exp_not:V \c__sjtu_name_degree_level_zh_tl
2065     \exp_not:V \c__sjtu_name_thesis_zh_tl
2066 </zh>
2067 <*en>
2068     A~ Dissertation~ Submitted~ to \exp_not:N \\
2069     { \exp_not:V \c__sjtu_name_univ_en_tl }~ for~
2070     the~ Degree~ of~ { \exp_not:V \c__sjtu_name_degree_level_en_tl }
2071 </en>
2072 <*de>
2073     Eine~ Dissertation~ Eingereicht~ an \exp_not:N \\
2074     der~ { \exp_not:V \c__sjtu_name_univ_de_tl }~ für~
2075     { \exp_not:V \c__sjtu_name_degree_level_de_tl } titel
2076 </de>
2077 <*ja>
2078     \exp_not:V \c__sjtu_name_univ_ja_tl
2079     \exp_not:V \c__sjtu_name_degree_level_ja_tl

```

```

2080         \exp_not:V \c__sjtu_name_thesis_ja_tl
2081 </ja>
2082     }
2083 }
2084 </thesis>

```

将形如 yyyy-mm-dd 或 yyyy-mm 的 ISO 日期格式字符串转化为日期表示。

```

__sjtu_date_aux_zh:nnn 中文日期。
__sjtu_date_aux_zh:w
__sjtu_date_aux_short_zh:nn 2085 <*zh>
__sjtu_date_aux_short_zh:w 2086 \cs_new:Npn __sjtu_date_aux_zh:nnn #1#2#3
2087 {
2088     \int_to_arabic:n {#1} ~ { \exp_not:V \c__sjtu_name_year_zh_tl } ~
2089     \int_to_arabic:n {#2} ~ { \exp_not:V \c__sjtu_name_month_zh_tl } ~
2090     \int_to_arabic:n {#3} ~ { \exp_not:V \c__sjtu_name_day_zh_tl }
2091 }
2092 \cs_new:Npn __sjtu_date_aux_zh:w #1-#2-#3 \q_stop
2093 { __sjtu_date_aux_zh:nnn {#1} {#2} {#3} }
2094 \cs_new:Npn __sjtu_date_aux_short_zh:nn #1#2
2095 {
2096     \int_to_arabic:n {#1} ~ { \exp_not:V \c__sjtu_name_year_zh_tl } ~
2097     \int_to_arabic:n {#2} ~ { \exp_not:V \c__sjtu_name_month_zh_tl }
2098 }
2099 \cs_new:Npn __sjtu_date_aux_short_zh:w #1-#2 \q_stop
2100 { __sjtu_date_aux_short_zh:nn {#1} {#2} }
2101 </zh>

```

__sjtu_ordinal_en:n 上标形式的序数词。

```

2102 <*en>
2103 \cs_new:Npn __sjtu_ordinal_en:n #1
2104 {
2105     \int_to_arabic:n {#1}
2106     \exp_not:N \textsuperscript
2107     {
2108         \int_case:nnF { \int_mod:nn {#1} { 100 } }
2109         {
2110             { 11 } { th }
2111             { 12 } { th }
2112             { 13 } { th }
2113         }
2114         {
2115             \int_case:nnF { \int_mod:nn {#1} { 10 } }
2116             {
2117                 { 1 } { st }
2118                 { 2 } { nd }
2119                 { 3 } { rd }
2120             }
2121             { th }
2122         }
2123     }
2124 }

```

__sjtu_date_aux_en:nnn 英文日期。

```

__sjtu_date_aux_en:w
__sjtu_date_aux_short_en:nn 2125 \cs_new:Npn __sjtu_date_aux_en:nnn #1#2#3
__sjtu_date_aux_short_en:w 2126 {
2127     \clist_item:Nn \c__sjtu_name_month_en_clist {#2} ~
2128     __sjtu_ordinal_en:n {#3} ,~
2129     \int_to_arabic:n {#1}
2130 }
2131 \cs_new:Npn __sjtu_date_aux_en:w #1-#2-#3 \q_stop
2132 { __sjtu_date_aux_en:nnn {#1} {#2} {#3} }
2133 \cs_new:Npn __sjtu_date_aux_short_en:nn #1#2
2134 {
2135     \clist_item:Nn \c__sjtu_name_month_en_clist {#2} ,~
2136     \int_to_arabic:n {#1}

```

```

2137 }
2138 \cs_new:Npn \__sjtu_date_aux_short_en:w #1-#2 \q_stop
2139 { \__sjtu_date_aux_short_en:nn {#1} {#2} }
2140 </en>

```

德文日期。

```

\__sjtu_date_aux_de:nnn
\__sjtu_date_aux_de:w
\__sjtu_date_aux_short_de:nn
\__sjtu_date_aux_short_de:w
2141 <*de>
2142 \cs_new:Npn \__sjtu_date_aux_de:nnn #1#2#3
2143 {
2144   \clist_item:Nn \c__sjtu_name_month_de_clist {#2} ~
2145   {#3} ,~ \int_to_arabic:n {#1}
2146 }
2147 \cs_new:Npn \__sjtu_date_aux_de:w #1-#2-#3 \q_stop
2148 { \__sjtu_date_aux_de:nnn {#1} {#2} {#3} }
2149 \cs_new:Npn \__sjtu_date_aux_short_de:nn #1#2
2150 {
2151   \clist_item:Nn \c__sjtu_name_month_de_clist {#2} ,~
2152   \int_to_arabic:n {#1}
2153 }
2154 \cs_new:Npn \__sjtu_date_aux_short_de:w #1-#2 \q_stop
2155 { \__sjtu_date_aux_short_de:nn {#1} {#2} }
2156 </de>

```

日文日期。

```

\__sjtu_date_aux_ja:nnn
\__sjtu_date_aux_ja:w
\__sjtu_date_aux_short_ja:nn
\__sjtu_date_aux_short_ja:w
2157 <*ja>
2158 \cs_new:Npn \__sjtu_date_aux_ja:nnn #1#2#3
2159 {
2160   \int_to_arabic:n {#1} ~ { \exp_not:V \c__sjtu_name_year_ja_tl } ~
2161   \int_to_arabic:n {#2} ~ { \exp_not:V \c__sjtu_name_month_ja_tl } ~
2162   \int_to_arabic:n {#3} ~ { \exp_not:V \c__sjtu_name_day_ja_tl }
2163 }
2164 \cs_new:Npn \__sjtu_date_aux_ja:w #1-#2-#3 \q_stop
2165 { \__sjtu_date_aux_ja:nnn {#1} {#2} {#3} }
2166 \cs_new:Npn \__sjtu_date_aux_short_ja:nn #1#2
2167 {
2168   \int_to_arabic:n {#1} ~ { \exp_not:V \c__sjtu_name_year_ja_tl } ~
2169   \int_to_arabic:n {#2} ~ { \exp_not:V \c__sjtu_name_month_ja_tl }
2170 }
2171 \cs_new:Npn \__sjtu_date_aux_short_ja:w #1-#2 \q_stop
2172 { \__sjtu_date_aux_short_ja:nn {#1} {#2} }
2173 </ja>

```

设置语言格式辅助命令

```

\__sjtu_set_language_zh:
\__sjtu_set_language_en:
\__sjtu_set_language_de:
\__sjtu_set_language_ja:
\__sjtu_set_cjk_default_zh:
\__sjtu_set_cjk_default_ja:
2174 <*zh>
2175 \cs_new:Nn \__sjtu_set_cjk_default_zh:
2176 {
2177   \tl_set:Nn \CJKrmddefault { zhsong }
2178   \tl_set:Nn \CJKsfdefault { zhhei }
2179   \tl_set:Nn \CJKttdefault { zhfs }
2180 }
2181 \cs_new_protected:Nn \__sjtu_set_language_zh:
2182 {
2183   \tl_set:Nn \languagename { chinese }
2184   \ctex_set:n { autoindent = true }
2185   \__sjtu_set_cjk_default_zh:
2186   \normalfont
2187 }
2188 </zh>
2189 <*en|de>
<en> 2190 \cs_new_protected:Nn \__sjtu_set_language_en:
<de> 2191 \cs_new_protected:Nn \__sjtu_set_language_de:
2192 {
<en> 2193   \tl_set:Nn \languagename { english }
<de> 2194   \tl_set:Nn \languagename { ngerman }
2195   \ctex_set:n { autoindent = 1.5 em }

```

```

2196     \normalfont
2197   }
2198 </en|de>
2199 <*ja>
2200 \cs_new:Nn \__sjtu_set_cjk_default_ja:
2201   {
2202     \tl_set:Nn \CJKrmdefault { jamin }
2203     \tl_set:Nn \CJKsfdefault { jagoth }
2204     \tl_set:Nn \CJKttdefault { jagoth }
2205   }
2206 \cs_new_protected:Nn \__sjtu_set_language_ja:
2207   {
2208     \tl_set:Nn \languagename { japanese }
2209     \ctex_set:n { autoindent = 1 }
2210     \__sjtu_set_cjk_default_ja:
2211     \normalfont
2212   }
2213 </ja>

```

标题页页面样式, 页脚添加资助基金信息。

```

2214 <*thesis>
<zh> 2215 \cs_new:Npn \ps@SJTU@fund@zh
<en> 2216 \cs_new:Npn \ps@SJTU@fund@en
<de> 2217 \cs_new:Npn \ps@SJTU@fund@de
<ja> 2218 \cs_new:Npn \ps@SJTU@fund@ja
2219   {
2220     \ps@empty
2221     \cs_set:Npn \@oddfoot
2222       {
2223         \minipage [ t ] { \textwidth }
2224         \centering \zihao { - 5 }
<zh> 2225 \clist_use:Nn \l__sjtu_info_fund_zh_clist { \par }
<en> 2226 \clist_use:Nn \l__sjtu_info_fund_en_clist { \par }
<de> 2227 \clist_use:Nn \l__sjtu_info_fund_de_clist { \par }
<ja> 2228 \clist_use:Nn \l__sjtu_info_fund_ja_clist { \par }
2229     \endminipage
2230   }
2231   \cs_set_eq:NN \@evenfoot \@oddfoot
2232 }
2233 </thesis>
2234 </lang>

```

初始化语言名称。

```

2235 <*scheme>
<zh> 2236 \tl_set:Nn \languagename { chinese }
<en> 2237 \tl_set:Nn \languagename { english }
<de> 2238 \tl_set:Nn \languagename { ngerman }
<ja> 2239 \tl_set:Nn \languagename { japanese }
2240 </scheme>

```

载入语言配置。

```

2241 <*class>
<thesis> 2242 \clist_map_inline:Nn \g__sjtu_lang_clist
<thesis> 2243   { \file_input:n { sjtu-lang-thesis- #1 .def } }
<!thesis> 2244 \file_input:n { sjtu-lang-generic- \g__sjtu_lang_tl .def }
2245 \file_input:n { sjtu-scheme- \g__sjtu_lang_tl .def }

```

info/date 初始化日期。

```

2246 \keys_define:nn { sjtu / info }
2247   {
2248     date      .code:n =
2249       {
2250         \regex_match:neTF { \d+-\d+-\d+ } {#1}
2251         {
2252 <*thesis>

```

```

2253         \clist_map_inline:Nn \g__sjtu_lang_clist
2254         {
2255             \tl_set:cx { l__sjtu_info_date_ ##1 _tl }
2256             { \exp_last_unbraced:ce { __sjtu_date_aux_ ##1 :w } #1 \q_stop }
2257         }
2258 </thesis>
2259 <!*thesis>
2260         \tl_set:Nx \@date
2261         {
2262             \exp_last_unbraced:ce
2263             { __sjtu_date_aux_ \g__sjtu_lang_tl :w } #1 \q_stop
2264         }
2265 </!thesis>
2266     }
2267     {
2268         \regex_match:neT { \d+-\d+ } {#1}
2269         {
2270 <!*thesis>
2271             \clist_map_inline:Nn \g__sjtu_lang_clist
2272             {
2273                 \tl_set:cx { l__sjtu_info_date_ ##1 _tl }
2274                 { \exp_last_unbraced:ce { __sjtu_date_aux_short_ ##1 :w } #1 \q_stop }
2275             }
2276 </thesis>
2277 <!*thesis>
2278             \tl_set:Nx \@date
2279             {
2280                 \exp_last_unbraced:ce
2281                 { __sjtu_date_aux_short_ \g__sjtu_lang_tl :w } #1 \q_stop
2282             }
2283 </!thesis>
2284         }
2285     }
2286 } ,
2287 date .initial:x =
2288 {
2289     \int_to_arabic:n { \c_sys_year_int } -
2290     \int_to_arabic:n { \c_sys_month_int } -
2291     \int_to_arabic:n { \c_sys_day_int }
2292 }
2293 }
<thesis> 2294 \tl_set:Nv \today { l__sjtu_info_date_ \g__sjtu_lang_tl _tl }
<!thesis> 2295 \tl_set:Nv \today \@date

```

6.19 标题页

6.19.1 定义内部函数

汉字分散对齐的环境。

```

2296 <!*thesis>
2297 \__sjtu_engine_case:nnn
2298 {
2299     \NewDocumentEnvironment { SJTU@CJK@FTS } { m b }
2300     {
2301         \mode_leave_vertical:
2302         \bool_set_false:N \l__sjtu_tmp_bool
2303         \cs_set_eq:NN \SJTU@CJK@FTS@Symbol \CJKsymbol
2304         \cs_set:Npn \CJKsymbol ##1
2305         {
2306             \bool_if:NTF \l__sjtu_tmp_bool
2307             { \hfil \SJTU@CJK@FTS@Symbol { ##1 } }
2308             {
2309                 \SJTU@CJK@FTS@Symbol { ##1 }
2310                 \bool_set_true:N \l__sjtu_tmp_bool
2311             }

```

```

2312     }
2313     \hbox_to_wd:nn {#1} {#2}
2314   } { }
2315 }
2316 {
2317   \NewDocumentEnvironment { SJTU@CJK@FTS } { m b }
2318   {
2319     \mode_leave_vertical:
2320     \cs_set:Npn \CJKglue
2321       { \skip_horizontal:n { \c_zero_dim plus 1 filll } }
2322     \hbox_to_wd:nn {#1} {#2}
2323   } { }
2324 }
2325 {
2326   \NewDocumentEnvironment { SJTU@CJK@FTS } { m b }
2327   {
2328     \mode_leave_vertical:
2329     \ltjsetparameter { kanjiskip = { \c_zero_dim plus 1 filll } }
2330     \hbox_to_wd:nn {#1} {#2}
2331   } { }
2332 }

```

汉字分散对齐的表格列说明符。

```

2333 \newcolumntype { \SJTUCT@D } [ 1 ]
2334 { >{ \begin { SJTU@CJK@FTS } {#1} } c <{ \end { SJTU@CJK@FTS } } }

```

信息输出。

```

\__sjtu_title_page_info_i:nnn
\__sjtu_title_page_info_i:nxx
\__sjtu_title_page_info_ii:n
2335 \cs_new:Npn \__sjtu_title_page_info_i:nnn #1#2#3
2336   {
2337     \clist_clear:N \l__sjtu_tmp_clist
2338     \clist_map_inline:nn {#3}
2339     {
2340       \clist_put_right:Nx \l__sjtu_tmp_clist
2341       {
2342         \exp_not:o { \cs:w c__sjtu_name_ ##1 _ #1 _tl \cs_end: }
2343         &
2344         \exp_not:o { \cs:w l__sjtu_info_ ##1 _ #1 _tl \cs_end: }
2345       }
2346     }
2347     \group_begin:
2348     \tl_set:Nn \arraystretch { 1 }
2349     \tabular {#2}
2350     \clist_use:Nn \l__sjtu_tmp_clist { \ }
2351     \endtabular
2352     \group_end:
2353   }
2354 \cs_new:Npn \__sjtu_title_page_info_ii:n #1
2355   {
2356     \tl_use:c { l__sjtu_info_department_ #1 _tl }
2357     \skip_vertical:N \c_zero_skip
2358     \tl_use:c { c__sjtu_name_univ_ #1 _tl }
2359     \skip_vertical:N \c_zero_skip
2360     \tl_use:c { c__sjtu_name_address_ #1 _tl }
2361     \skip_vertical:N \c_zero_skip
2362     \tl_use:c { l__sjtu_info_date_ #1 _tl }
2363   }
2364 \cs_generate_variant:Nn \__sjtu_title_page_info_i:nnn { nxx }
2365 </thesis>
2366 </class>

```

6.19.2 构建标题页

```

2367 <*lang>
2368 <*thesis>
2369 <*zh>

```



```

2370 \clist_map_inline:nn
2371 {
2372   { logo }
2373   {
2374     content =
2375     {
2376       \includegraphics [ width = 3 cm ]
2377       { sjtu-vi-badge-red.pdf }
2378     }
2379   },
2380   { subject }
2381   {
2382     format = \zihao { -2 } \setbaselineskip { 30 bp } ,
2383     content = \l__sjtu_info_subject_zh_tl ,
2384     bottom-skip = \c_zero_dim plus 1 fill
2385   },
2386   { title }
2387   {
2388     format = \zihao { 2 } \setbaselineskip { 36 bp } \bfseries ,
2389     content = \l__sjtu_info_display_title_zh_tl ,
2390     bottom-skip = 30 bp plus 1 fill
2391   },
2392   { info }
2393   {
2394     format = \zihao { 4 } \setbaselineskip { 30 bp } \heiti ,
2395     content =
2396     {
2397       \__sjtu_title_page_info_i:nxx { zh }
2398       {
2399         \exp_not:N \SJTU@CT@D { 5 em }
2400         @ { \exp_not:V \c__sjtu_name_info_sep_zh_tl }
2401         >{ \exp_not:N \normalfont } l
2402       }
2403       {
2404         author,
2405         id,
2406         \l__sjtu_info_supervisors_clist ,
2407         department,
2408         major,
2409         \int_compare:nNnF { \g__sjtu_thesis_type_int } = { 1 }
2410         { degree }
2411       }
2412     } ,
2413     bottom-skip = 30 bp
2414   },
2415   { date }
2416   {
2417     format = \zihao { 4 } \setbaselineskip { 30 bp } \bfseries ,
2418     content = \l__sjtu_info_date_zh_tl ,
2419   }
2420 }
2421 {
2422   \__sjtu_declare_component:nnn { title / zh } #1
2423 }
2424 \__sjtu_declare_page:nn { title / zh }
2425 {
2426   bookmark = true ,
2427   bookmark-text = \c__sjtu_name_title_page_tl ,
2428   style = SJTU@fund@zh ,
2429   format = \linespread { } \__sjtu_set_language_zh: ,
2430   prefix = title / zh ,
2431   components = { logo, subject, title, info, date }
2432 }
2433 </zh>
2434 <*en|de|ja>
2435 \clist_map_inline:nn
2436 {

```

```

2437 { subject }
2438 {
2439     format      = \zihao { 4 } \setbaselineskip { 24 bp } \bfseries ,
(en) 2440     content     = \l__sjtu_info_subject_en_tl ,
(de) 2441     content     = \l__sjtu_info_subject_de_tl ,
(ja) 2442     content     = \l__sjtu_info_subject_ja_tl ,
2443     bottom-skip = \c_zero_dim plus 1 fill
2444 },
2445 { title }
2446 {
2447     format      = \zihao { -2 } \setbaselineskip { 30 bp } \bfseries ,
(en) 2448     content     = \MakeUppercase \l__sjtu_info_display_title_en_tl ,
(de) 2449     content     = \MakeUppercase \l__sjtu_info_display_title_de_tl ,
(ja) 2450     content     = \l__sjtu_info_display_title_ja_tl ,
2451     bottom-skip = \c_zero_dim plus 1 fill
2452 },
2453 { info }
2454 {
2455     format      = \zihao { 3 } \setbaselineskip { 30 bp } \bfseries ,
2456     content     =
2457     {
(en) 2458         \__sjtu_title_page_info_i:nxx { en }
(de) 2459         \__sjtu_title_page_info_i:nxx { de }
(ja) 2460         \__sjtu_title_page_info_i:nxx { ja }
2461         {
(en) 2462             r @ { \exp_not:V \c__sjtu_name_info_sep_en_tl }
(de) 2463             r @ { \exp_not:V \c__sjtu_name_info_sep_de_tl }
(ja) 2464             r @ { \exp_not:V \c__sjtu_name_info_sep_ja_tl }
2465             >{ \exp_not:N \normalfont } l
2466         }
2467         { author, \l__sjtu_info_supervisors_clist }
2468     } ,
2469     bottom-skip = 30 bp plus 1 fill
2470 },
2471 { date }
2472 {
2473     format      = \zihao { 3 } \setbaselineskip { 30 bp } ,
2474     content     =
(en) 2475     { \__sjtu_title_page_info_ii:n { en } } ,
(de) 2476     { \__sjtu_title_page_info_ii:n { de } } ,
(ja) 2477     { \__sjtu_title_page_info_ii:n { ja } } ,
2478 },
2479 }
2480 {
(en) 2481     \__sjtu_declare_component:nnn { title / en } #1
(de) 2482     \__sjtu_declare_component:nnn { title / de } #1
(ja) 2483     \__sjtu_declare_component:nnn { title / ja } #1
2484 }
2485 (*en)
2486 \__sjtu_declare_page:nn { title / en }
2487 {
2488     style      = SJTU@fund@en ,
2489     format     = \linespread { } \__sjtu_set_language_en : ,
2490     prefix     = title / en ,
2491     components = { subject, title, info, date }
2492 }
2493 (en)
2494 (*de)
2495 \__sjtu_declare_page:nn { title / de }
2496 {
2497     style      = SJTU@fund@de ,
2498     format     = \linespread { } \__sjtu_set_language_de : ,
2499     prefix     = title / de ,
2500     components = { subject, title, info, date }
2501 }
2502 (de)
2503 (*ja)

```

```

2504 \_sjtu_declare_page:nn { title / ja }
2505 {
2506     style      = SJTU@fund@ja ,
2507     format     = \linespread { } \_sjtu_set_language_ja: ,
2508     prefix     = title / ja ,
2509     components = { subject, title, info, date }
2510 }
2511 </ja>
2512 </en|de|ja>
2513 </thesis>
2514 </lang>

```

`\maketitle` 生成标题页, 输出前先确定需要显示的导师列表。

```

2515 <*class>
2516 <*thesis>
2517 \RenewDocumentCommand \maketitle { }
2518 {
2519     \clist_map_inline:nn
2520     { assoc_supervisor, co_supervisor }
2521     {
2522         \tl_if_empty:cF { l__sjtu_info_ ##1 _zh_tl }
2523         { \clist_put_right:Nn \l__sjtu_info_supervisors_clist {##1} }
2524     }
2525     \clist_map_inline:Nn \g__sjtu_lang_clist
2526     { \UseInstance { sjtu } { title / ##1 } }
2527 }
2528 </thesis>

```

6.20 原创性声明及使用授权书

```

2529 <*thesis>
2530 \cs_new_protected:Npn \_sjtu_signature:N #1
2531 {
2532     \parbox [ t ] { 12 em }
2533     { #1 \c__sjtu_signature_text_zh_tl }
2534 }
2535 \clist_map_inline:nn
2536 {
2537     { orig / title }
2538     {
2539         format      = \zihao { 3 } \setbaselineskip { 30 bp }
2540                     \bfseries \heiti ,
2541         content     =
2542         {
2543             \c__sjtu_name_univ_zh_tl
2544             \skip_vertical:N \c_zero_skip
2545             \c__sjtu_name_thesis_zh_tl
2546             \c__sjtu_name_orig_decl_zh_tl
2547         } ,
2548         bottom-skip = 12 bp
2549     },
2550     { orig / text }
2551     {
2552         format      = \zihao { -4 } \setbaselineskip { 24 bp } ,
2553         content     = \c__sjtu_orig_decl_text_zh_tl ,
2554         bottom-skip = 24 bp ,
2555         align       = normal
2556     },
2557     { orig / sign }
2558     {
2559         format      = \zihao { 4 } \setbaselineskip { 30 bp } ,
2560         content     =
2561         {
2562             \_sjtu_signature:N \c__sjtu_name_decl_author_zh_tl
2563             \skip_horizontal:n { 4 em } \hbox:n { }
2564         } ,

```

```

2565     bottom-skip = \c_zero_dim plus 2 fill ,
2566     align       = right
2567   },
2568   { auth / title }
2569   {
2570     format      = \zihao { 3 } \setbaselineskip { 30 bp }
2571               \bfseries \heiti ,
2572     content     =
2573     {
2574       \c__sjtu_name_univ_zh_tl
2575       \skip_vertical:N \c_zero_skip
2576       \c__sjtu_name_thesis_zh_tl
2577       \c__sjtu_name_auth_decl_zh_tl
2578     } ,
2579     bottom-skip = 12 bp
2580   },
2581   { auth / text }
2582   {
2583     format      = \zihao { -4 } \setbaselineskip { 24 bp } ,
2584     content     = \c__sjtu_auth_decl_text_zh_tl ,
2585     bottom-skip = 24 bp ,
2586     align       = normal
2587   },
2588   { auth / sign }
2589   {
2590     format      = \zihao { 4 } \setbaselineskip { 30 bp } ,
2591     content     =
2592     {
2593       \__sjtu_signature:N \c__sjtu_name_decl_author_zh_tl
2594       \hfill
2595       \__sjtu_signature:N \c__sjtu_name_decl_supervisor_zh_tl
2596       \skip_horizontal:n { 2 em } \hbox:n { }
2597     } ,
2598     bottom-skip = \c_zero_dim plus 1 fill ,
2599     align       = normal
2600   }
2601 }
2602 {
2603   \__sjtu_declare_component:nnn { copyright } #1
2604 }
2605 \__sjtu_declare_page:nn { copyright }
2606 {
2607   bookmark      = true ,
2608   bookmark-text = \c__sjtu_name_declaration_tl ,
2609   format        = \linespread { } \__sjtu_set_language_zh: ,
2610   prefix        = copyright ,
2611   components    =
2612   {
2613     orig / title, orig / text, orig / sign,
2614     auth / title, auth / text, auth / sign
2615   }
2616 }
2617 \msg_new:nnn { sjtutex } { require-pdfpages }
2618 {
2619   Add~"\token_to_str:N \usepackage{pdfpages}"~ in~ your~ preamble \\
2620   before~ inserting~ pages~ of~ external~ PDF.
2621 }
\copyrightpage 2622 \NewDocumentCommand \copyrightpage { 0{ } }
2623 {
2624   \bool_if:NF \g__sjtu_review_bool
2625   {
2626     \tl_if_blank:NTF {#1}
2627     { \UseInstance { sjtu } { copyright } }
2628     {
2629       \cs_if_exist:NTF \includepdf
2630       {
2631         \bool_if:NTF \g__sjtu_openright_bool

```

```

2632         { \cleardoublepage } { \clearpage }
2633         \_sjtu_pdf_bookmark:nn { 0 } { \c__sjtu_name_declaration_tl }
2634         \includepdf {#1}
2635     }
2636     {
2637         \msg_warning:nn { sjtutex } { require-pdfpages }
2638         \UseInstance { sjtu } { copyright }
2639     }
2640 }
2641 }
2642 }
2643 </thesis>

```

6.21 摘要

`style/keywords-format` 关键词排版样式。

```

2644 \keys_define:nn { sjtu / style }
2645 {
2646     keywords-format .choice: ,
2647     keywords-format / plain .code:n =
2648     { \cs_set:Nn \_sjtu_keywords_format:n { \noindent { \bfseries ##1 } } } ,
2649     keywords-format / hang .code:n =
2650     { \cs_set:Nn \_sjtu_keywords_format:n { \@hangfrom { \bfseries ##1 } } } ,
2651     keywords-format .initial:n = { plain }
2652 }

```

`abstract` 学位论文摘要环境。

`abstract*`

```

2653 <*thesis>
2654 \DeclareDocumentEnvironment { abstract } { 0{ zh } +b }
2655 {
2656     \_sjtu_if_lang_valid:nTF {#1}
2657     {
2658         \use:c { \_sjtu_set_language_ #1 : }
2659         \exp_args:Nv \SJTU@head { c__sjtu_name_abstract_ #1 _tl }
2660         #2
2661         \clist_if_empty:cF { l__sjtu_info_keywords_ #1 _clist }
2662         {
2663             \par \mode_leave_vertical: \par
2664             \_sjtu_keywords_format:n
2665             {
2666                 \tl_use:c { c__sjtu_name_keywords_ #1 _tl }
2667                 \tl_use:c { c__sjtu_name_info_sep_ #1 _tl }
2668             }
2669             \clist_use:cv { l__sjtu_info_keywords_ #1 _clist }
2670             { c__sjtu_name_item_sep_ #1 _tl }
2671             \par
2672         }
2673     }
2674     { \msg_error:nnn { sjtutex } { lang-validation } {#1} }
2675 } { }
2676 \DeclareDocumentEnvironment { abstract* } { 0{ zh } +b }
2677 {
2678     \_sjtu_if_lang_valid:nTF {#1}
2679     {
2680         \use:c { \_sjtu_set_language_ #1 : }
2681         \exp_args:NNv \SJTU@head* { c__sjtu_name_abstract_ #1 _tl }
2682         #2
2683         \clist_if_empty:cF { l__sjtu_info_keywords_ #1 _clist }
2684         {
2685             \par \mode_leave_vertical: \par
2686             \_sjtu_keywords_format:n
2687             {
2688                 \tl_use:c { c__sjtu_name_keywords_ #1 _tl }
2689                 \tl_use:c { c__sjtu_name_info_sep_ #1 _tl }
2690             }

```

```

2691         \clist_use:cv { l__sjtu_info_keywords_ #1 _clist }
2692         { c__sjtu_name_item_sep_ #1 _tl }
2693     \par
2694 }
2695 }
2696 { \msg_error:nnn { sjtutex } { lang-validation } {#1} }
2697 } { }
2698 </thesis>

```

修复通用模板摘要段首缩进。

```

2699 <!*thesis>
2700 \bool_if:NT \g__sjtu_titlepage_bool
2701 { \__sjtu_appto_cmd:Nn \abstract { \par } }

```

通用模板摘要后添加关键词。

```

2702 \__sjtu_preto_cmd:Nn \endabstract
2703 {
2704     \clist_if_empty:NF \l__sjtu_info_keywords_clist
2705     {
2706         \par \mode_leave_vertical: \par
2707         \__sjtu_keywords_format:n
2708         {
2709             \c__sjtu_name_keywords_tl
2710             \c__sjtu_name_info_sep_tl
2711         }
2712         \clist_use:NV \l__sjtu_info_keywords_clist \c__sjtu_name_item_sep_tl
2713     \par
2714 }
2715 }
2716 </!thesis>

```

6.22 目录

`\tableofcontents` 目录。
`\tableofcontents*`

```

2717 \DeclareDocumentCommand \tableofcontents { s }
2718 {
2719     \IfBooleanTF {#1}
2720     { \SJTU@head* { \contentsname } }
2721     { \SJTU@head { \contentsname } }
2722     \@starttoc { toc }
2723 }

2724 \tl_set:Nn \SJTU@leaders { \titlerule* [ 4bp ] { . } }
2725 \contentsmargin [ 2.55 em ] { 0 pt }
<article> 2726 \titlecontents { section }
<!article> 2727 \titlecontents { chapter }
2728 [ 0 pt ] { \addvspace { 6 bp } \bfseries }
2729 { \contentspush { \thecontentslabel \enskip } } { }
2730 { \SJTU@leaders \thecontentspage }
<article> 2731 \titlecontents { subsection }
<!article> 2732 \titlecontents { section }
2733 [ 2 em ] { }
2734 { \contentspush { \thecontentslabel \enskip } } { }
2735 { \SJTU@leaders \thecontentspage }
<article> 2736 \titlecontents { subsubsection }
<!article> 2737 \titlecontents { subsection }
2738 [ 4 em ] { }
2739 { \contentspush { \thecontentslabel \enskip } } { }
2740 { \SJTU@leaders \thecontentspage }

```

`\SJTU@listof` 图表索引。

```

\__sjtu_new_list_of:Nnnn 2741 \NewDocumentCommand \SJTU@listof { m m s }
\listoffigures 2742 {
\listoffigures*
\listoftables
\listoftables*

```

```

2743 \IfBooleanTF {#3}
2744 { \SJTU@head* {#1} }
2745 { \SJTU@head {#1} }
2746 \exp_args:Nv \@starttoc { ext@ #2 }
2747 }
2748 \cs_new_protected:Npn \__sjtu_new_list_of:Nnnn #1#2#3#4
2749 {
2750 \DeclareDocumentCommand #1 { }
2751 { \SJTU@listof {#4} {#2} }
2752 \titlecontents {#2}
2753 [ 0 pt ] { }
2754 { \contentspush { #3 \space \thecontentslabel \enskip } } { }
2755 { \SJTU@leaders \thecontentspage }
2756 \exp_args:Nnv \contentsuse {#2} { ext@ #2 }
2757 }
2758 \__sjtu_new_list_of:Nnnn \listoffigures { figure }
2759 { \figurename } { \listfigurename }
2760 \__sjtu_new_list_of:Nnnn \listoftables { table }
2761 { \tablename } { \listtablename }

```

6.23 预定义环境

abbreviation 缩略语对照表。

abbreviation*

```

2762 <*thesis>
2763 \NewDocumentEnvironment { abbreviation } { 0 { \SJTU@abbrname } }
2764 {
2765 \chapter {#1}
2766 \tl_clear:N \SJTU@style@float@font
2767 } { }
2768 \NewDocumentEnvironment { abbreviation* } { 0 { \SJTU@abbrname } }
2769 {
2770 \SJTU@head* {#1}
2771 \tl_clear:N \SJTU@style@float@font
2772 } { }

```

nomenclature 符号对照表。

nomenclature*

```

2773 \NewDocumentEnvironment { nomenclature } { 0 { \SJTU@nomname } }
2774 {
2775 \chapter {#1}
2776 \tl_clear:N \SJTU@style@float@font
2777 } { }
2778 \NewDocumentEnvironment { nomenclature* } { 0 { \SJTU@nomname } }
2779 {
2780 \SJTU@head* {#1}
2781 \tl_clear:N \SJTU@style@float@font
2782 } { }

```

acknowledgements 致谢, 盲审模式下隐藏致谢。

```

2783 \NewDocumentEnvironment { acknowledgements } { 0 { \SJTU@ackname } +b }
2784 {
2785 \bool_if:NF \g__sjtu_review_bool
2786 {
2787 \SJTU@head {#1}
2788 #2
2789 }
2790 } { }

```

achievements 发表论文与学术成果。

bibliolist

bibliolist*

```

2791 \newcounter { SJTU@bib }
2792 \NewDocumentEnvironment { @bibliolist } { m }
2793 {
2794 \cs_if_exist_use:N \bibfont
2795 \list

```

```

2796 {
2797   \tl_if_blank:nTF {#1}
2798     { \hfill }
2799     { \@biblabel { \arabic{ SJTU@bib } } }
2800 }
2801 {
2802   \tl_if_blank:nTF {#1}
2803     {
2804       \skip_if_exist:NTF \bibhang
2805         { \dim_set_eq:NN \leftmargin \bibhang }
2806         { \dim_set:Nn \leftmargin { 1 em } }
2807       \dim_set:Nn \itemindent { - \leftmargin }
2808     }
2809     {
2810       \_sjtu_dim_set_to_wd:Nn \labelwidth { \@biblabel {#1} }
2811       \dim_set_eq:NN \leftmargin \labelwidth
2812       \dim_add:Nn \leftmargin { \labelsep }
2813     }
2814   \skip_if_exist:NTF \bibitemsep
2815     {
2816       \skip_set_eq:NN \itemsep \bibitemsep
2817       \skip_if_exist:NT \bibparsep
2818         { \skip_set_eq:NN \parsep \bibparsep }
2819     }
2820     {
2821       \skip_if_exist:NT \bibsep
2822         {
2823           \skip_set_eq:NN \itemsep \bibsep
2824           \skip_zero:N \parsep
2825         }
2826     }
2827   \@nmblisttrue
2828   \tl_set:Nn \@listctr { SJTU@bib }
2829   \cs_set:Npn \p@SJTU@bib { }
2830   \cs_set:Npn \theSJTU@bib { \arabic { SJTU@bib } }
2831 }
2832 \sloppy
2833 \int_set:Nn \clubpenalty { 4000 }
2834 \int_set_eq:NN \@clubpenalty \clubpenalty
2835 \int_set:Nn \widowpenalty { 4000 }
2836 \char_set_sfcode:nn { \. } { 1000 }
2837 }
2838 {
2839   \cs_set:Npn \@noitemerr
2840     { \msg_warning:nnn { sjtutex } { empty-environment } { bibliolist } }
2841   \endlist
2842 }
2843 \msg_new:nnn { sjtutex } { empty-environment }
2844 { Empty~`#1'~ environment. }
2845 \bool_new:N \l__sjtu_achievements_bool
2846 \NewDocumentEnvironment { achievements } { 0 { \SJTU@achvname } }
2847 {
2848   \SJTU@head {#1}
2849   \setcounter { SJTU@bib } { 0 }
2850   \bool_set_true:N \l__sjtu_achievements_bool
2851 } { }
2852 \NewDocumentEnvironment { bibliolist } { m +b }
2853 {
2854   \bool_if:NF \l__sjtu_achievements_bool
2855     {
2856       \msg_error:nnnn { sjtutex } { environment-validation }
2857         { bibliolist } { achievements }
2858     }
2859   \bool_if:NF \g__sjtu_review_bool
2860     {
2861       \cs_set:Npn \@noitemerr { }
2862       \begin { @bibliolist } {#1}

```



```

2863         #2
2864         \end { @bibliolist }
2865     }
2866 } { }
2867 \NewDocumentEnvironment { bibliolist* } { m +b }
2868 {
2869     \bool_if:NF \l__sjtu_achievements_bool
2870     {
2871         \msg_error:nnnn { sjtutex } { environment-validation }
2872         { bibliolist* } { achievements }
2873     }
2874     \bool_if:NT \g__sjtu_review_bool
2875     {
2876         \cs_set:Npn \@noitemerr { }
2877         \begin { @bibliolist } {#1}
2878         #2
2879         \end { @bibliolist }
2880     }
2881 } { }
2882 \msg_new:nnn { sjtutex } { environment-validation }
2883 { `#1'~ is~ only~ valid~ in~ `#2'~ environment. }

```

resume 简历。

```

2884 \NewDocumentEnvironment { resume } { 0 { \SJTU@resumename } +b }
2885 {
2886     \bool_if:NF \g__sjtu_review_bool
2887     {
2888         \SJTU@head {#1}
2889         #2
2890     }
2891 } { }

```

digest 大摘要。

```

2892 \NewDocumentEnvironment { digest } { 0 { en } +b }
2893 {
2894     \__sjtu_if_lang_valid:nTF {#1}
2895     {
2896         \AtEndDocument
2897         {
2898             \use:c { __sjtu_set_language_ #1 : }
2899             \bool_if:NTF \g__sjtu_openright_bool
2900             { \cleardoublepage } { \clearpage }
2901             \pagenumbering { roman }
2902             \cs_gset:Nn \__sjtu_thepage: { \arabic { page } }
2903             \cs_gset_eq:NN \addcontentsline \use_none:nnn
2904             \clist_map_inline:Nn \l__sjtu_counter_without_chapter_clist
2905             {
2906                 \counterwithout {##1} { chapter }
2907                 \setcounter {##1} { 0 }
2908             }
2909             \__sjtu_head_aux_s:nx { \SJTU@digestname }
2910             {
2911                 \exp_not:N \MakeUppercase
2912                 { \exp_not:v { l__sjtu_info_title_ #1 _t1 } }
2913             }
2914             #2
2915         }
2916     }
2917     { \msg_error:nnn { sjtutex } { lang-validation } {#1} }
2918 } { }
2919 </thesis>

```

6.24 设置接口

`\sjtusetup` 用户设置接口。

```
2920 \NewDocumentCommand \sjtusetup { } { \keys_set:nn { sjtu } }
```

定义元(meta)键值对。

```
2921 \keys_define:nn { sjtu }
2922 {
2923   style .meta:nn = { sjtu / style } {#1} ,
2924   info .meta:nn = { sjtu / info } {#1} ,
2925   name .meta:nn = { sjtu / name } {#1}
2926 }
```

兼容 `sjtuthesis` 旧接口。

```
2927 <thesis>
2928 \keys_define:nn { sjtu / info }
2929 {
2930   title .meta:n = { zh / title = {#1} } ,
2931   title* .meta:n = { en / title = {#1} } ,
2932   display-title .meta:n = { zh / display-title = {#1} } ,
2933   display-title* .meta:n = { en / display-title = {#1} } ,
2934   subject .meta:n = { zh / subject = {#1} } ,
2935   subject* .meta:n = { en / subject = {#1} } ,
2936   keywords .meta:n = { zh / keywords = {#1} } ,
2937   keywords* .meta:n = { en / keywords = {#1} } ,
2938   author .meta:n = { zh / author = {#1} } ,
2939   author* .meta:n = { en / author = {#1} } ,
2940   supervisor .meta:n = { zh / supervisor = {#1} } ,
2941   supervisor* .meta:n = { en / supervisor = {#1} } ,
2942   assoc-supervisor .meta:n = { zh / assoc-supervisor = {#1} } ,
2943   assoc-supervisor* .meta:n = { en / assoc-supervisor = {#1} } ,
2944   co-supervisor .meta:n = { zh / co-supervisor = {#1} } ,
2945   co-supervisor* .meta:n = { en / co-supervisor = {#1} } ,
2946   degree .meta:n = { zh / degree = {#1} } ,
2947   degree* .meta:n = { en / degree = {#1} } ,
2948   department .meta:n = { zh / department = {#1} } ,
2949   department* .meta:n = { en / department = {#1} } ,
2950   major .meta:n = { zh / major = {#1} } ,
2951   major* .meta:n = { en / major = {#1} } ,
2952   fund .meta:n = { zh / fund = {#1} } ,
2953   fund* .meta:n = { en / fund = {#1} } ,
2954   display-date .meta:n = { zh / date = {#1} } ,
2955   display-date* .meta:n = { en / date = {#1} }
2956 }
2957 \keys_define:nn { sjtu / name }
2958 {
2959   abbreviation .meta:n = { abbr = {#1} } ,
2960   nomenclature .meta:n = { nom = {#1} } ,
2961   acknowledgements .meta:n = { ack = {#1} } ,
2962   publications .meta:n = { achv = {#1} } ,
2963   achievements .meta:n = { achv = {#1} }
2964 }
2965 </thesis>
```

`\subject` 通用模板新接口。

`\keywords`

```
2966 <thesis>
2967 \NewDocumentCommand \subject { m }
2968 { \keys_set:nn { sjtu / info } { subject = {#1} } }
2969 \NewDocumentCommand \keywords { m }
2970 { \keys_set:nn { sjtu / info } { keywords = {#1} } }
2971 </thesis>
```

6.25 其他宏包的设置

这些宏包并非格式要求,但是为了方便同学们使用,在这里进行简单设置。

6.25.1 hyperref 宏包

```

2972 \ctex_at_end_package:n { hyperref }
2973 {
2974   \hypersetup
2975   {
2976     linktoc           = all,
2977     bookmarksdepth   = 2,
2978     bookmarksnumbered = true,
2979     bookmarksopen    = true,
2980     bookmarksopenlevel = 1,
2981     unicode          = true,
2982     psdextra         = true,
2983     breaklinks       = true,
2984     pdfdisplaydoctitle = true
2985   }
2986   \int_new:N \g__sjtu_bookmark_int
2987   \cs_gset_protected:Npn \__sjtu_pdf_bookmark:nn #1#2
2988   {
2989     \phantomsection
2990     \int_gincr:N \g__sjtu_bookmark_int
2991     \pdfbookmark [#1] {#2}
2992     { sjtubookmark. \int_use:N \g__sjtu_bookmark_int }
2993   }
2994   \cs_gset_eq:NN \__sjtu_phantom_section: \phantomsection
2995   \pdfstringdefDisableCommands
2996   {
2997     \cs_set_eq:NN \ \ \prg_do_nothing:
2998     \cs_set_eq:NN \quad \c_empty_tl
2999     \cs_set_eq:NN \qqquad \c_empty_tl
3000     \cs_set_eq:NN \hspace \use_none:n
3001   }
3002   \ctex_after_end_preamble:n
3003   {
3004     \hypersetup
3005     {
3006 <thesis>
3007         pdftitle   = \l__sjtu_info_title_zh_tl ,
3008         pdfauthor  = \l__sjtu_info_author_zh_tl ,
3009         pdfsubject = \l__sjtu_info_subject_zh_tl ,
3010         pdfkeywords = \l__sjtu_info_keywords_zh_clist
3011 </thesis>
3012 <!*thesis>
3013         pdftitle   = \@title ,
3014         pdfauthor  = \@author ,
3015         pdfsubject = \l__sjtu_info_subject_tl ,
3016         pdfkeywords = \l__sjtu_info_keywords_clist
3017 </!*thesis>
3018     }
3019   }
3020 }

```

6.25.2 threeparttable 宏包

```

3021 \ctex_at_end_package:n { threeparttable }
3022 { \tl_put_right:Nn \TPNoteSettings { \footnotesize } }

```

6.25.3 longtable 宏包

```

3023 \ctex_at_end_package:n { longtable }
3024 { \AtBeginEnvironment { longtable } { \SJTU@style@float@font } }

```

6.25.4 amsthm 宏包和 ntheorem 宏包

预定义的数学环境, 不包括证明环境 `proof`。定义前会检测环境是否已经存在, 避免覆盖用户的定义。

```

3025 \cs_new_protected:Nn \__sjtu_new_theorems:

```

```

3026 {
3027   \clist_map_inline:nn
3028     {
3029       assumption, axiom, conjecture, corollary, definition, example,
3030       exercise, lemma, problem, proposition, theorem
3031     }
3032     {
3033       \cs_if_exist:cF {##1}
3034 <!*article>
3035       {
3036         \exp_args:Nnv \newtheorem {##1} { c__sjtu_name_ ##1 _t1 }
3037         [ chapter ]
3038       }
3039 </!article>
<article> 3040     { \exp_args:Nnv \newtheorem {##1} { c__sjtu_name_ ##1 _t1 } }
3041     }
3042     \clist_map_inline:nn
3043     { remark, solution }
3044     {
3045       \cs_if_exist:cF {##1}
3046       { \exp_args:NNnv \newtheorem* {##1} { c__sjtu_name_ ##1 _t1 } }
3047     }
3048   }

```

`amsthm` 会定义 `\openbox`, 为避免与一些宏包冲突, 我们先保存 `\openbox`, 然后取消定义。

```

3049 \ctex_at_begin_package:nn { amsthm }
3050 {
3051   \cs_if_exist:NT \openbox
3052   {
3053     \cs_new_eq:NN \__sjtu_save_openbox: \openbox
3054     \cs_undefine:N \openbox
3055   }
3056 }
3057 \ctex_at_end_package:nn { amsthm }
3058 {
3059   \__sjtu_cs_provide_eq:NN \QED \openbox
3060   \cs_if_exist:NT \__sjtu_save_openbox:
3061     { \cs_set_eq:NN \openbox \__sjtu_save_openbox: }
3062   \tl_set:Nn \qedsymbol { \ensuremath { \QED } }
3063   \RenewDocumentEnvironment { proof } { O{ \proofname } }
3064     {
3065       \par \pushQED { \qed }
3066       \SJTU@style@thm@body@font \dim_zero:N \topsep
3067       \trivlist
3068       \item
3069       [
3070         \skip_horizontal:N \labelsep
3071         \SJTU@style@thm@header@font #1 \@addpunct { \enskip }
3072       ]
3073       \ignorespaces
3074     }
3075     { \popQED \endtrivlist \@endpefalse }
3076   \newtheoremstyle { sjtu }
3077     { } { } { \SJTU@style@thm@body@font } { }
3078     { \SJTU@style@thm@header@font } { } { \ccwd } { }
3079 }

```

如果用户加载了 `amsthm` 或 `ntheorem` 宏包, 则在导言区末尾应用预设的样式定义定理环境。

```

3080 \ctex_at_end_preamble:n
3081 {
3082   \@ifpackageloaded { amsthm }
3083   {
3084     \theoremstyle { sjtu }
3085     \__sjtu_new_theorems:
3086   }

```

```

3087 {
3088   \@ifpackageloaded { ntheorem }
3089   {
3090     \_sjtu_cs_provide_eq:NN \QED \c_empty_tl
3091     \theoremheaderfont { \SJTU@style@thm@header@font }
3092     \theorembodyfont { \SJTU@style@thm@body@font }
3093     \theoremseparator { \enskip }
3094     \theoremsymbol { \ensuremath { \QED } }
3095     \qedsymbol { \ensuremath { \QED } }
3096     \cs_if_exist:NF \proof
3097     { \newtheorem* { proof } { \proofname } }
3098     \theoremsymbol { }
3099     \_sjtu_new_theorems:
3100   } { }
3101 }
3102 }

```

6.25.5 thmtools 宏包

使用 titletoc 包设置 \listoftheorems 的样式。

```

3103 \ctex_at_end_package:nn { thmtools }
3104 {
3105   \cs_set:Npn \thmtlo@newentry
3106   {
3107     \exp_args:NV \titlecontents \thmt@envname
3108     [ \thmt@listnumwidth ] { }
3109     { \contentslabel { \thmt@listnumwidth } }
3110     { \hspace* { - \thmt@listnumwidth } }
3111     { \SJTU@leaders \thecontentspage }
3112     \exp_args:NV \contentsuse \thmt@envname { loe }
3113   }
3114   \cs_set:Npn \thmtlo@chaptervspacehack { }
3115   \RenewDocumentCommand \listoftheorems { s O{ } }
3116   {
3117     \group_begin:
3118     \setlisttheoremstyle {#2}
3119     \IfBooleanTF {#1}
3120     { \SJTU@head* { \listtheoremname } }
3121     { \SJTU@head { \listtheoremname } }
3122     \cs_set:Npn \contentsline ##1
3123     { \use:c { thmt@contentsline@ ##1 } {##1} }
3124     \clist_map_inline:Nn \thmt@allenvs
3125     {
3126       \tl_set:Nn \thmt@envname {##1}
3127       \thmtlo@newentry
3128     }
3129     \@fileswfalse
3130     \AddToHook { enddocument / afterlastpage }
3131     {
3132       \if@filesw
3133       \@ifundefined { tf@loe }
3134       {
3135         \expandafter\newwrite\csname tf@loe\endcsname
3136         \immediate\openout \csname tf@loe\endcsname \jobname.loe\relax
3137       } { }
3138     } \fi
3139   }
3140   \@starttoc { loe }
3141   \group_end:
3142 }
3143 }

```

6.25.6 algorithm 宏包和 algorithm2e 宏包

algorithm 宏包。

```

3144 \ctex_at_end_package:nn { algorithm }
3145 {
3146   \tl_set:Nn \fname@algorithm { \SJTU@algorithmname }
3147   \tl_set:Nn \listalgorithmname { \SJTU@listalgorithmname }
<|article> 3148   \SJTU@counterwithin { algorithm } { chapter }
<|thesis> 3149   \clist_put_right:Nn \l__sjtu_counter_without_chapter_clist { algorithm }
3150   \__sjtu_new_list_of:Nnnn \listofalgorithms { algorithm }
3151   { \fname@algorithm } { \listalgorithmname }
3152 }

```

algorithm2e 宏包。

```

<|article> 3153 \ctex_at_begin_package:nn { algorithm2e }
<|article> 3154 { \cs_set_eq:NN \__sjtu_save_chapter:w \@chapter }
3155 \ctex_at_end_package:nn { algorithm2e }
3156 {
<|article> 3157   \cs_set_eq:NN \@chapter \__sjtu_save_chapter:w
3158   \SetAlgorithmName { \SJTU@algorithmname }
3159   { \SJTU@algorithmname }
3160   { \SJTU@listalgorithmname }
3161   \SetAlgoCaptionSeparator { \enskip }
<|article> 3162   \SJTU@counterwithin { algocf } { chapter }
<|thesis> 3163   \clist_put_right:Nn \l__sjtu_counter_without_chapter_clist { algocf }
3164   \__sjtu_new_list_of:Nnnn \listofalgorithms { algocf }
3165   { \algorithmcfname } { \listalgorithmcfname }
3166   \ctex_patch_cmd:Nnn \algocf@latexcaption
3167   { \addcontentsline }
3168   { \caption@iflist { \addcontentsline } { \@gobblethree } }
3169 }

```

6.25.7 nomenc1 宏包

```

3170 \ctex_at_end_package:nn { nomenc1 }
3171 { \tl_set:Nn \nomname { \SJTU@nomname } }

```

6.25.8 translations 宏包

```

3172 \ctex_at_end_package:nn { translations }
3173 {
3174   \DeclareLanguage { chinese }
3175   \DeclareLanguageAlias { Chinese } { chinese }
3176 }

```

6.25.9 siunitx 宏包

```

3177 \ctex_at_end_package:nn { siunitx }
3178 {
3179   \RequirePackage { translations }
3180   \DeclareTranslation { Chinese } { and } { 和 }
3181   \DeclareTranslation { Japanese } { and } { と }
3182   \DeclareTranslation { Chinese }
3183   { to~(numerical~range) } { \textasciitilde }
3184   \DeclareTranslation { Japanese }
3185   { to~(numerical~range) } { \textasciitilde }
3186   \IfPackageAtLeastTF { siunitx } { 2021/05/17 } { }
3187   {
3188     \DeclareTranslation { English } { to~(numerical~range) } { to }
3189     \DeclareTranslation { German } { to~(numerical~range) } { bis }
3190     \keys_set:nn { siunitx }
3191     {
3192       list-final-separator =
3193       {
3194         \ifmmode \ \else \space \fi
3195         \text { \GetTranslation { and } }

```

```

3196         \ifmmode \ \else \space \fi
3197     } ,
3198     list-pair-separator =
3199     {
3200         \ifmmode \ \else \space \fi
3201         \text { \GetTranslation { and } }
3202         \ifmmode \ \else \space \fi
3203     } ,
3204     range-phrase      =
3205     {
3206         \ifmmode \ \else \space \fi
3207         \text { \GetTranslation { to~(numerical~range) } }
3208         \ifmmode \ \else \space \fi
3209     }
3210 }
3211 }
3212 }
3213 </class>

```

6.26 名称配置

```

3214 <*name>
3215 <*zhja>
3216 \clist_map_inline:nn
3217 {
3218     { year } { 年 } ,
3219     { month } { 月 } ,
3220     { day } { 日 }
3221 }
<zh> 3222 { \__sjtu_define_name:nnn { zh } #1 }
<ja> 3223 { \__sjtu_define_name:nnn { ja } #1 }
3224 </zhja>
3225 <*en>
3226 \clist_const:Nn \c__sjtu_name_month_en_clist
3227 {
3228     January, February, March, April, May, June,
3229     July, August, September, October, November, December
3230 }
3231 </en>
3232 <*de>
3233 \clist_const:Nn \c__sjtu_name_month_de_clist
3234 {
3235     Januar, Februar, März, April, Mai, Juni,
3236     Juli, August, September, Oktober, November, Dezember
3237 }
3238 </de>
3239 <*thesis>
3240 <*zh>
3241 \__sjtu_define_symbol:nn { white_square } { "25A1 }
3242 \__sjtu_define_name_from_clist:nnnn { zh }
3243 { degree_level } { \g__sjtu_thesis_type_int }
3244 { 学士, 硕士, 博士 }
3245 </zh>
3246 <*en>
3247 \__sjtu_define_name_from_clist:nnnn { en }
3248 { degree_level } { \g__sjtu_thesis_type_int }
3249 { Bachelor, Master, Doctor }
3250 </en>
3251 <*de>
3252 \__sjtu_define_name_from_clist:nnnn { de }
3253 { degree_level } { \g__sjtu_thesis_type_int }
3254 { Bachelor, Master, Doktor }
3255 </de>
3256 <*ja>
3257 \__sjtu_define_name_from_clist:nnnn { ja }
3258 { degree_level } { \g__sjtu_thesis_type_int }
3259 { 学士, 修士, 博士 }

```

```

3260 </ja>
3261 </thesis>
3262 < *zh>
3263 \clist_map_inline:nn
3264 {
3265 < *thesis>
3266 { univ } { 上海交通大学 } ,
3267 { author } { 姓名 } ,
3268 { id } { 学号 } ,
3269 { supervisor } { 导师 } ,
3270 { assoc_supervisor } { 副导师 } ,
3271 { department } { 院系 } ,
3272 { co_supervisor } { 联合导师 } ,
3273 { major } { 学科 / 专业 } ,
3274 { degree } { 申请学位 } ,
3275 { thesis } { 学位论文 } ,
3276 { title_page } { 题名页 } ,
3277 { declaration } { 原创性声明及使用授权书 } ,
3278 { orig_decl } { 原创性声明 } ,
3279 { auth_decl } { 使用授权书 } ,
3280 { decl_author } { 学位论文作者 } ,
3281 { decl_supervisor } { 指导教师 } ,
3282 { abstract } { 摘 \protect \quad 要 } ,
3283 </thesis>
3284 { keywords } { 关键词 } ,
3285 { info_sep } { : \null } ,
3286 { item_sep } { , }
3287 }
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<!thesis> 3289 { \__sjtu_define_name:nn #1 }
3290 </zh>
3291 < *en>
3292 \clist_map_inline:nn
3293 {
3294 < *thesis>
3295 { univ } { Shanghai~ Jiao~ Tong~ University } ,
3296 { address } { Shanghai,~ P.R.~ China } ,
3297 { author } { Author } ,
3298 { supervisor } { Supervisor } ,
3299 { assoc_supervisor } { Assoc.\ Supervisor } ,
3300 { co_supervisor } { Co-supervisor } ,
3301 { title_page } { Title~ Page } ,
3302 { declaration } { Statutory~ Declaration } ,
3303 { abstract } { Abstract } ,
3304 </thesis>
3305 { keywords } { Key~words } ,
3306 { info_sep } { :~ } ,
3307 { item_sep } { ,~ }
3308 }
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<!thesis> 3310 { \__sjtu_define_name:nn #1 }
3311 </en>
3312 < *de>
3313 \clist_map_inline:nn
3314 {
3315 < *thesis>
3316 { univ } { Shanghai~ Jiao~ Tong~ Universität } ,
3317 { address } { Shanghai,~ VR~ China } ,
3318 { author } { Autor/in } ,
3319 { supervisor } { Betreuer/in } ,
3320 { assoc_supervisor } { Zweitbetreuer/in } ,
3321 { co_supervisor } { Co-Betreuer/in } ,
3322 { title_page } { Titelblatt } ,
3323 { declaration } { Eidesstattliche~ Erklärung } ,
3324 { abstract } { Abstrakt } ,
3325 </thesis>
3326 { keywords } { Schlüsselwörter } ,

```



```

3327 { info_sep      } { :~          } ,
3328 { item_sep      } { ,~          }
3329 }
<thesis> 3330 { \_sjtu_define_name:nnn { de } #1 }
<!thesis> 3331 { \_sjtu_define_name:nn #1 }
3332 </de>
3333 <*ja>
3334 \clist_map_inline:nn
3335 {
3336 <*thesis>
3337 { univ          } { 上海交通大学      } ,
3338 { address       } { 中国·上海        } ,
3339 { author        } { 氏名            } ,
3340 { supervisor    } { 指導教員        } ,
3341 { assoc_supervisor } { 副指導教員      } ,
3342 { co_supervisor } { 共同指導        } ,
3343 { thesis        } { 學位請求論文    } ,
3344 { title_page    } { 標題紙          } ,
3345 { declaration   } { 誓約書·公表許諾書 } ,
3346 { abstract      } { 要 \protect \quad 旨 } ,
3347 </thesis>
3348 { keywords      } { キーワード      } ,
3349 { info_sep      } { : \null         } ,
3350 { item_sep      } { \quad          }
3351 }
<thesis> 3352 { \_sjtu_define_name:nnn { ja } #1 }
<!thesis> 3353 { \_sjtu_define_name:nn #1 }
3354 </ja>
3355 <*thesis>
3356 <*zh>
3357 \tl_const:Nn \c__sjtu_orig_decl_text_zh_tl
3358 {
3359 本人郑重声明：所呈交的学位论文，是本人在导师的指导下，独立进行研究工作所取得的成果。除文中已经注明引用的内容外，本论文不包含任何其他个人或集体已经发表或撰写过的作品成果。对本文的研究做出重要贡献的个人和集体，均已在文中以明确方式标明。本人完全知晓本声明的法律后果由本人承担。
3360
3361
3362
3363
3364 }
3365 \tl_const:Nn \c__sjtu_auth_decl_text_zh_tl
3366 {
3367 本人同意学校保留并向国家有关部门或机构送交论文的复印件和电子版，允许论文被查阅和借阅。 \par
3368
3369 \vskip 6 bp
3370 \noindent
3371 本学位论文属于： \par
3372 { \c__sjtu_symbol_white_square_tl } \textbf { 公开论文 } \par
3373 { \c__sjtu_symbol_white_square_tl } \textbf { 内部论文 } ,
3374 保密 { \c__sjtu_symbol_white_square_tl }~ 1~ 年 /
3375      { \c__sjtu_symbol_white_square_tl }~ 2~ 年 /
3376      { \c__sjtu_symbol_white_square_tl }~ 3~ 年 ,
3377 过保密期后适用本授权书。 \par
3378 { \c__sjtu_symbol_white_square_tl } \textbf { 秘密论文 } ,
3379 保密 \underline { \hspace { 2 em } } 年 (不超过~ 10~ 年) ,
3380 过保密期后适用本授权书。 \par
3381 { \c__sjtu_symbol_white_square_tl } \textbf { 机密论文 } ,
3382 保密 \underline { \hspace { 2 em } } 年 (不超过~ 20~ 年) ,
3383 过保密期后适用本授权书。 \par
3384 \hspace { 6 em } (请在以上方框内选择打 “ \ensuremath { \checkmark } ” )
3385 }
3386 \tl_const:Nn \c__sjtu_signature_text_zh_tl
3387 {
3388 签名： \\
3389 日期： \hspace { \stretch { 3 } } 年
3390      \hspace { \stretch { 2 } } 月
3391      \hspace { \stretch { 2 } } 日
3392 }
3393 </zh>

```

```

3394 </thesis>
3395 </name>

3396 <*scheme>
3397 \clist_map_inline:nn
3398 {
3399 <*zh>
3400   { assumption } { 假设       } ,
3401   { axiom      } { 公理       } ,
3402   { conjecture } { 猜想       } ,
3403   { corollary  } { 推论       } ,
3404   { definition } { 定义       } ,
3405   { example    } { 例         } ,
3406   { exercise   } { 练习       } ,
3407   { lemma      } { 引理       } ,
3408   { problem    } { 问题       } ,
3409   { proposition} { 命题       } ,
3410   { remark     } { 注         } ,
3411   { solution   } { 解         } ,
3412   { theorem    } { 定理       }
3413 </zh>
3414 <*en>
3415   { assumption } { Assumption } ,
3416   { axiom      } { Axiom      } ,
3417   { conjecture } { Conjecture } ,
3418   { corollary  } { Corollary  } ,
3419   { definition } { Definition  } ,
3420   { example    } { Example    } ,
3421   { exercise   } { Exercise   } ,
3422   { lemma      } { Lemma      } ,
3423   { problem    } { Problem    } ,
3424   { proposition} { Proposition } ,
3425   { remark     } { Remark     } ,
3426   { solution   } { Solution   } ,
3427   { theorem    } { Theorem    }
3428 </en>
3429 <*de>
3430   { assumption } { Annahme    } ,
3431   { axiom      } { Axiom      } ,
3432   { conjecture } { Hypothese  } ,
3433   { corollary  } { Korollar   } ,
3434   { definition } { Definition  } ,
3435   { example    } { Beispiel   } ,
3436   { exercise   } { Übung      } ,
3437   { lemma      } { Lemma      } ,
3438   { problem    } { Problem    } ,
3439   { proposition} { Proposition } ,
3440   { remark     } { Anmerkung  } ,
3441   { solution   } { Lösung     } ,
3442   { theorem    } { Theorem    }
3443 </de>
3444 <*ja>
3445   { assumption } { 仮定       } ,
3446   { axiom      } { 公理       } ,
3447   { conjecture } { 予想       } ,
3448   { corollary  } { 系         } ,
3449   { definition } { 定義       } ,
3450   { example    } { 例         } ,
3451   { exercise   } { 練習       } ,
3452   { lemma      } { 補題       } ,
3453   { problem    } { 問題       } ,
3454   { proposition} { 命題       } ,
3455   { remark     } { 注意       } ,
3456   { solution   } { 解法       } ,
3457   { theorem    } { 定理       }
3458 </ja>
3459 }
3460 { \_sjtu_define_name:nn #1 }

```

3461 </scheme>

版本历史

v2.0	(2021/09/10 – 2023/03/23)	v2.0.3	(2023/04/08 – 2023/09/25)
General: <code>sjtuthesis</code> 类型选项移除 <code>course</code> , 不再支持课程论文。	16	General: 学位论文页面纵向顶部对齐。	42
<code>abstract</code> 环境新增指定语言的可选参数。	61	新增 <code>libertinus</code> 字体配置。	26
<code>digest</code> 环境新增指定语言的可选参数。	65	更新学位论文初始英文主题。	51
不再自动载入 <code>pdfpages</code> 宏包。	60	添加 <code>siunitx</code> 本地化支持。	70
使用 <code>assoc-supervisor</code> 键表示副导师, 使用 <code>co-supervisor</code> 键表示联合导师。	50	移除 <code>listings</code> 宏包预设。	66
使用语言代码前缀区别不同语种的 <code>sjtu/info</code> 键。	50	v2.1	(2023/10/24 – 2024/01/10)
启用新版封面。	56	General: <code>abstract</code> 环境添加目录条目, <code>abstract*</code> 环境对应修改为不添加目录条目。	61
应用 \LaTeX 3 重构代码。	1	<code>\tableofcontents</code> 添加目录条目, <code>\tableofcontents*</code> 对应修改为不添加目录条目。	62
新增文档类 <code>sjtupart</code> 和 <code>sjturreport</code> 。	1	同步 \LaTeX 2020/10/01, 无需显式调用 <code>expl3</code> 和 <code>xparse</code> 宏包。	15
添加 <code>display-date</code> 键。	50	新增 <code>style/equation-font</code> 选项。	46
添加 <code>lineskip</code> 文档类选项。	17	新增 <code>style/indent-first</code> 选项。	45
添加 <code>math-style</code> 文档类选项, 默认值为 <code>ISO</code> 。	17	新增 <code>style/keywords-format</code> 选项。	61
添加 <code>subject</code> 键。	50	新增 <code>style/num-sep</code> , <code>style/theorem-num-sep</code> 选项。	48
移除 <code>summary</code> 环境。	63	更新题注格式。	47
简化 <code>sjtu/name</code> 中键的名称: <code>abbr</code> , <code>nom</code> , <code>ack</code> , <code>achv</code> 。	40	标题页信息栏改用表格实现。	56
语言选项新增 <code>de</code> , 添加德文模板。	16	添加 <code>baselineskip</code> 文档类选项, 替换原 <code>lineskip</code> 选项。	17
语言选项新增 <code>ja</code> , 添加日文模板。	16	v2.1.1	(2024/03/21 – 2024/03/22)
重新制定 <code>sjtu/style</code> 域中的接口。	66	General: 新增 <code>style/theorem-header-font</code> , <code>style/theorem-body-font</code> 选项。	46
v2.0.1	(2023/03/31)	添加 <code>thmtools</code> 宏包支持。	69
General: 插图、表格和算法等索引不缩进。	62	预定义的数学环境声明移至导言区末尾, 且不会覆盖重名的已定义环境。	67
调整插图、表格和算法等索引编号宽度。	62	v2.1.2	(2024/03/31)
v2.0.2	(2023/03/31 – 2023/04/01)	General: 改用 <code>titletoc</code> 设置目录格式。	62
General: 区分 <code>dim</code> 与 <code>skip</code> 类型变量。	21	v2.1.3	(2024/06/28)
延迟载入字体配置, 修复 <code>unicode-math</code> 设置不生效的问题。	39	General: 更新目录样式。	62
标题页日期底部增加空白。	56		

代码索引

意大利体的数字表示描述对应索引项的页码；带下划线的数字表示定义对应索引项的代码行号；罗马字体的数字表示使用对应索引项的代码行号。

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\. 2836
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 _ 3194, 3196, 3200, 3202, 3206, 3208, 3299

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 \abovedisplayskip 465, 468, 476, 479
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 \AddToHook 3130
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 \bibitemsep 2814, 2816
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 \bm 984
 \boldsymbol 986

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