

HEUTHESIS: 哈尔滨工程大学学位论文模板

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摘要

该宏包为哈尔滨工程大学本、硕、博中英文毕业论文、开题和中期报告以及博后出站报告模板。

免责声明

1. 本模板的发布遵守 L^AT_EX Project Public License, 使用前请认真阅读协议内容。
2. 本模板为作者根据 哈尔滨工程大学本科生院颁发的《[哈尔滨工程大学本科生毕业论文撰写规范](#)》, 哈尔滨工程大学研究生院颁发的《[哈尔滨工程大学研究生学位论文撰写规范](#)》编写而成, 为 哈尔滨工程大学学学生撰写毕业论文使用。
3. 哈尔滨工程大学教务处和研究生院只提供毕业论文写作指南, 不提供官方模板, 也未授权第三方模板为官方模板, 所以此模板仅为写作指南的参考实现, 不保证格式审查老师不提意见。任何由于使用本模板而引起的论文格式审查问题均与本模板作者无关。
4. 任何个人或组织以本模板为基础进行修改、扩展而生成的新的专用模板, 请严格遵守 L^AT_EX Project Public License 协议。由于违犯协议而引起的任何纠纷争端均与本模板作者无关。

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1 模板介绍

HEUTHESIS (Harbin Engineering University L^AT_EX Thesis Template) 是为了帮助 哈尔滨工程大学毕业生撰写毕业论文而编写的 L^AT_EX 论文模板。

本模板是基于哈尔滨工业大学学位论文模板 HI⁺THESIS 修改而来。

本文档将尽量完整的介绍模板的使用方法，如有不清楚之处可以参考示例文档，有兴趣者都可以参与完善此手册，也非常欢迎对代码的贡献。

文档记号的说明

本文采用不同字体表示不同内容。无衬线字体表示宏包名称，如 x_eCJK 宏包、heuhesis-book 文档类等；等宽字体表示代码或文件名，如 \heusetup 命令、thesis.tex 等；带有尖括号的楷体（或西文斜体）表示命令参数，如 模板选项、English title 等。在使用时，参数两侧的尖括号不必输入。示例代码进行了语法高亮处理，以方便阅读。在用户手册中，带有紫色侧边线的为 L^AT_EX 代码，而带有红色侧边线的则为命令行代码，请注意区分。

注意：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，否则即便用了 HEUTHESIS 也难以保证输出的论文符合学校规范。

2 安装

HEUTHESIS 一般不需要进行安装，直接将压缩包解压后就可以使用。

2.1 模板的组成

下表列出了 HEUTHESIS 的主要文件及其功能介绍：

文件（夹）	功能描述
heuthesis.ins	DOCSTRIP 驱动文件（开发用）
heuthesis.dtx	DOCSTRIP 源文件（开发用）
heuthesisbook.cls	模板类文件
heuthesisbook.cfg	模板配置文件
heuthesis.bst	参考文献样式文件
heuthesis.ist	索引样式文件
reference.bib	文档参考文献
main.tex	示例文档主文件
front/	正文之前内容
body/	正文内容
back/	正文之后内容
data/	TiZk 绘图数据文件
figures/	插图图片路径
heuthesis.sty	为示例文档加载其它宏包
Makefile	Makefile

文件（夹）	功能描述
latexmkrc	latexmk 配置文件
README.md	Readme
heuthesis.pdf	用户手册（本文档）

几点说明：

- `heuthesisbook.cls` 和 `heuthesisbook.cfg` 可由 `heuthesis.ins` 和 `heuthesis.dtx` 生成。
- 使用前阅读文档： `heuthesis.pdf`。
- 默认生成的论文中含有丰富的格式示例，使用前请仔细阅读 `main.pdf`。

2.2 生成模板

将模板解压缩到文件夹，其中包括：模板源文件（`heuthesis.ins` 和 `heuthesis.dtx`），参考文献样式 `heuthesis.bst` 和示例文档。在使用之前需要先生成模板文件和配置文件（具体命令细节请参考 `README.md` 和 `Makefile`）：

如果是直接使用编译后的模板文件，可以忽略下述操作。

```
$ cd heuthesis
# 生成 heuthesisbook.cls 和 heuthesisbook.cfg
$ xelatex heuthesis.ins

# 下面的命令用来生成用户手册，可以不执行
$ xelatex heuthesis.dtx
$ makeindex -s gind.ist -o heuthesis.ind heuthesis.idx
$ makeindex -s gglo.ist -o heuthesis.gls heuthesis.glo
$ xelatex heuthesis.dtx
$ xelatex heuthesis.dtx % 生成说明文档 heuthesis.pdf
```

2.3 生成论文

本节介绍几种常见的生成论文的方法。用户可根据自己的情况选择。

2.3.1 X_gLaTeX

很多用户对 LaTeX 命令执行的次数不太清楚。一个基本的原则是多次运行 LaTeX 命令直至不再出现警告。下面给出生成示例文档的详细过程（# 开头的行为注释），首先来看推荐的 `xelatex` 方式：

```
# 1. 发现里面的引用关系，文件后缀 .tex 可以省略
$ xelatex main

# 2. 编译参考文献源文件，生成 bbl 文件
$ bibtex main

# 3. 下面解决引用
$ xelatex main
```

```
$ xelatex main    # 如果不需要生成索引此时生成完整的 pdf 文件
$ splitindex main -- -s heuthesis.ist  # 自动生成索引
$ xelatex main.tex
```

2.3.2 latexmk

latexmk 命令支持全自动生成 L^AT_EX 编写的文档，并且支持使用不同的工具链来进行生成，它会自动运行多次工具直到交叉引用都被解决。下面给出了一个用 latexmk 调用 xelatex 生成最终文档的示例：

```
# 一句话就够了！
$ latexmk -xelatex main
```

2.3.3 make

上面的方法虽然不复杂，但是每次都输入还是非常罗嗦，所以 HEU^THESIS 提供了一个 Makefile：

```
$ make clean
$ make cls      # 生成 heuthesisbook.cls 和 heuthesisbook.cfg
$ make doc      # 生成说明文档 heuthesis.pdf
$ make main     # 生成示例文档 main.pdf
```

HEU^THESIS 的 Makefile 默认用 latexmk 调用 xelatex 编译，此外还支持直接用 xelatex 编译。如有需要可修改 Makefile 开头的参数或通过命令行传递参数（请参看 README.md），进一步还可以修改 latexmkrc 进行定制。

生成新的类文件和配置文件即可。也可以直接拷贝 heuthesisbook.cls, heuthesisbook.cfg 和 heuthesis.ist，免去上面命令的执行。

2.3.4 buidl.bat

示例文件夹中也包含了 build.bat 批处理文件，在 Windows 环境下可以直接使用改批处理文件生成最终 PDF 格式的论文 main.pdf。

2.4 生成封面

模板还提供了用于生成论文 A3 页面的封面定义文档。用户可根据自己的情况选择。

A3 封面的生成是利用上述论文的首页封面和书脊拼合而成，因此在生成 A3 封面需要先生成论文 main.pdf 并在 spine.tex 定义论文标题和作者姓名信息，然后使用 xelatex 依次编译 spine.tex 和 a3cover.tex：

```
# 1. 使用 xelatex
$ xelatex spine
$ xelatex a3cover

# 2. 或者使用 latexmk
$ latexmk spine
$ latexmk a3cover
```

在 Windows 系统下也可以直接使用 make_cover.bat 批处理生成 A3 封面。

3 使用说明

本手册假定用户已经能处理一般的 \LaTeX 文档，并对 \BibTeX 有一定了解。如果从来没有接触过 \TeX 和 \LaTeX ，建议先学习相关的基础知识。

3.1 示例文件

模板核心文件有三个：`heuthesisbook.cls`、`heuthesisbook.cfg` 和 `heuthesis.bst`，但是如果如果没有示例文档用户会发现很难下手。所以推荐新用户从模板自带的示例文档入手，里面包括了论文写作用到的所有命令及其使用方法，只需要用自己的内容进行相应替换就可以。对于不清楚的命令可以查阅本手册。下面的例子描述了模板中章节的组织形式，来自于示例文档，具体内容可以参考模板附带的 `main.tex`。

```
% !Mode:: "TeX:UTF-8"
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%
%                               大工至善，大学至臻
%
%                               哈尔滨工程大学论文模板
%
%                               Email: lwh@hrbeu.edu.cn
%                               https://www.hrbeu.edu.cn
%
%                               https://gitee.com/liwenhui/heuthesis
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

\documentclass[fontset=fandol,type=master,language=english]{heuthesisbook}
% No space between options
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% Mandatory option
% type=doctor|master|bachelor|postdoc
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% Optional option (with default value)
% campus=qingdao|yantai|harbin
% Default:harbin
% glue=true|false
% Line spacing: true means [3,4]mm, false means 3mm.
% tocfour=true|false
% TOC level four or three
% fontset=windows|mac|ubuntu|fandol|adobe|founder
% Normally, TeX could detect your OS font automatically. If not, explicitly
```

```

% set your OS here, or, use open source font set
% openright=true|false
% Force the Chapter page number to be even or not.
% pageempty=true|false
% Empty page without pagehead and pagefoot
% library=true|false
% Set this option will remove all blank page in your thesis, Library
preferred.
% newtxmath=true|false
% Math font used in the thesis
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

\usepackage{heuthesis}
\graphicspath{{figures/}}
\begin{document}

\frontmatter
\input{front/cover}
\makecover
\include{front/acknowledgements}
\tableofcontents

\mainmatter
\include{body/eng_regu}

\backmatter
\include{back/conclusion}
\bibliographystyle{heuthesis}
\bibliography{reference}
\include{back/publications}
\end{document}

% !Mode:: "TeX:UTF-8"
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

%
%
% 大工至善，大学至臻
%
% 哈尔滨工程大学论文模板
%
%
% Email: lwh@hrbeu.edu.cn
% https://www.hrbeu.edu.cn
%
%
% https://gitee.com/liwenhui/heuthesis
%
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

```

\documentclass[type=master,fontset=windows]{heuthesisbook}
% 此处选项中不要有空格
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% 必填选项
% type=doctor|master|bachelor|postdoc
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% 选填选项（选填选项的缺省值已经尽可能满足了大多数需求，除非明确知道自己有什么
% 需求）
% campus=qingdao|yantai|harbin
% 含义：校区选项，默认harbin
% profdegree=true|false
% 含义：是否为专业学位，缺省值为false。专业学位和同等学力等，要在cover中设置类
% 型，封面中不同格式
% 注意：当 profdegree=true 需设置下面的 research 选项
% researchtype=productdevelopment|projectdplanning|projectdesign|
applicationResearch
% 含义：专业学位论文研究类型，产品设计|工程规划|工程设计|应用研究
% 注意：当 profdegree=true 时需设置此选项，不设置的话默认为applicationResearch
% tocfour=true|false
% 含义：是否添加第四级目录，只对本科文科个别要求四级目录有效，缺省值为
% false
% fontset=windows|mac|ubuntu|fandol|adobe
% 含义：设置字体，默认情况会自动识别系统，然后设置字体。后两个是开源字体，自行
% 下载安装后设置使用。
% chapterhang=true|false
% 含义：目录的章标题是否悬挂居中，规范中要求章标题少于15字，所以这个选项
% 有无没什么用，除了特殊需求。缺省值为true。
% subtitle=true|false
% 含义：论文题目是否含有副标题，缺省值为false，如果有要在cover中设置副标
% 题内容，封面中显示。
% openright=true|false
% 含义：博士论文是否要求章节首页必须在奇数页，此选项不在规范要求中，按个
% 人喜好自行决定。默认否。注意，我校的默认情况是打印版博士论文要求右翻页
% ，电子版要求非右翻页且无空白页。如果想DIY（或身不由己DIY）在什么地方右
% 翻页，将这个选项设置为false，然后在目标位置添加`\cleardoublepage`命令即
% 可。
% pageempty=true|false
% 含义：空白页是否无页眉页脚（默认否）。
% library=true|false
% 含义：是否为提交到图书馆的电子版。默认否。注意：如果设置成true，那么
% openright选项将被强制转换为false。
% capcenterlast=true|false
% 含义：图题、表题最后一行是否居中对齐（我校规范要求居中，但不要求居中对
% 齐），此选项不在规范要求中，按个人喜好自行决定。默认否。
% subcapcenterlast=true|false
% 含义：子图图题最后一行是否居中对齐（我校规范要求居中，但不要求居中对齐

```



```

%    ), 此选项不在规范要求中, 按个人喜好自行决定。默认否。
% absupper=true|false
% 含义: 中文目录中的英文摘要在中文目录中的大小写样式歧义, 在规范中要求首
% 字母大写, 在work样例中是全大写。该选项控制是否全大写。默认否。
% bsmainpagenumberline=true|false
% 含义: 是否在正文中显示页码横线, 默认否。
% bsfrontpagenumberline=true|false
% 含义: 是否在前文中显示页码横线, 默认否。
% bsheadrule=true|false
% 含义: 由于本科生论文官方模板的页码和页眉格式混乱, 提供这个选项自定义设
% 置是否显示页眉横线, 默认显示。
% splitbibitem=true|false
% 含义: 参考文献每一个条目内能不能断页, 默认否。
% newtxmath=true|false
% 含义: 数学字体是否使用新罗马。默认是。
% chapterbold=true|false
% 含义: 章标题在目录和正文中是否加粗
% engtoc=true|false
% 含义: 是否需要添加英文目录
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

\usepackage{heuthesis}

\graphicspath{{figures/}}

\begin{document}
\frontmatter
\input{front/cover} % 封面和扉页
\makecover

\authorization % 使用模板生成的原始原创性与授权声明页
%%\authorization[auscan.pdf] % 使用签字扫描版的原创性与授权声明页

\cleardoublepage % 控制右开页, 与前文连续开页时注释掉
\makeabstract % 封面和摘要

\cleardoublepage % 控制右开页, 与前文连续开页时注释掉
\tableofcontents % 论文目录

%%\cleardoublepage % 控制右开页, 与前文连续开页时注释掉
\listoffigures % 插图目录, 如不需要可用 % 注释掉下面两行

%%\cleardoublepage % 控制右开页, 与前文连续开页时注释掉
\listoftables % 表格目录, 如不需要可用 % 注释掉下面两行

%%----- 论文主体, 可以根据需要添加章节 -----
\cleardoublepage % 控制右开页, 后续论文正文一般采用此格式
\mainmatter
\include{body/chap01}

```

```

\include{body/chap02}
\include{body/chap03}
\include{body/chap04}
\include{body/chap05}
\include{body/chap06}
\include{body/chap07}

%%-----  论文结论、参考文献、附录等部分  -----
\backmatter
\include{back/conclusion}    % 结论

\biographystyle{heuthesis}
\bibliography{reference}
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% 硕博书序
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

%% \include{back/publications}    % 所发文章
\include{back/acknowledgements} %致谢
\include{back/resume}           % 个人简介

\include{back/AppendixA.tex}
\include{back/AppendixB.tex}

%% \include{back/ceindex}        % 索引，根据自己的情况添加或者不添加，选择自动添加或者手工添加。
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% 本科书序为：
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% \include{back/acknowledgements} %致谢
% \include{back/appendix01}%本科生翻译论文
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% 博后书序
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% \include{back/acknowledgements} %致谢
% \include{back/doctorpublications}    % 所发文章
% \include{back/publications}        % 所发文章
% \include{back/resume}              % 个人简介
% \include{back/correspondingaddr}   %通信地址

```

```
%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
\end{document}
```

3.2 论文选项

论文选项，就是在 `main.tex` 文件的开头，非注释的第一行的方括号中填写的选项，示例见上节。各个选项的含义说明已经在上节中说明，所以这里就不重复了。

3.3 中文字体

正确配置中文字体是使用模板的第一步。模板调用 $\text{CT}_{\text{E}}\text{X}$ 宏包，只提供基于 $\text{x}_{\text{e}}\text{C}_{\text{J}}\text{K}$ 包，使用 $\text{X}_{\text{L}}\text{A}_{\text{T}}\text{E}_{\text{X}}$ 编译的方式。关于如何使用字体命令、字号等等，属于模板格式范畴，在实现细节中讨论。关于中文字体安装、配置的所有问题不在本模板讨论范围。

3.4 前文

前文内容是正文之前，含封面、摘要、目录、符号表。封面信息提供两种配置方法：一是通过统一设置命令 `\heusetup` 通过 `key=value` 形式完成；二是每个信息利用命令独立设置，其中命令的名字跟 `key` 相同。两种方式可以交叉使用，并按顺序执行（即后来的设置会覆盖前面的）。以 `c` 开头的命令跟中文相关，`e` 开头则为对应的英文。

`\heusetup` `\heusetup` 用法与常见 `key=value` 命令相同，如下：

```
\heusetup{
  key1 = value1,
  key2 = {a value, with comma},
}
% 可以多次调用
\heusetup{
  key3 = value3,
  key1 = value11, % 覆盖 value1
}
```

注意：`\heusetup` 使用 `kvoptions` 机制，所以配置项之间不能有空行，否则会报错。

大多数命令的使用方法都是：`\command{<arg>}`，例外者将具体指出。这些命令都在示例文档的 `front/cover.tex` 中。

3.4.1 密级

`statesecrets` 定义秘密级别、编号和国内国际索引号。

```

cnumber
natclassifiedindex
intclassifiedindex
\heusetup{
  statesecrets={公开},
  cnumber={no9527},
  natclassifiedindex={TM301.2},
  intclassifiedindex={62-5},
}
```

3.4.2 论文标题

论文标题 中英文标题。如果有副标题，需要在封面选项中设置 `subtitle=true`，否则不显示副标题。博士后研究报告封面研究内容标题采用两行格式，需要对 `ctitleone` 和 `ctitletwo` 分别定义。

```

ctitle
etitle
ctitleone
ctitletwo
csubtitle
esubtitle
\heusetup{
  ctitlecover={封面中文题目（可使用 \cs\cs 断行）},
  ctitle={论文中文题目（页眉等不断行处使用）},
  etitle={Thesis English Title},
  csubtitle={论文中文副题目（如果有）},
  esubtitle={Thesis English Sub-Title (if necessary)},
  ctitleone={博士后中文题目上部分},
  ctitletwo={博士后中文题目下部分},
}
```

3.4.3 作者姓名

作者姓名 作者姓名。

```

cauthor
eaauthor
\heusetup{
  cauthor={中文姓名},
  eaauthor={Name in Pinyin}
}
```

3.4.4 申请学位名称

学科名称 按照入学的培养计划中学科自行填写，具体学科名称不是本文档范畴。

```

cxueke
exueke
\heusetup{
  cxueke={工学},
  exueke={Engineering},
}
```

3.4.5 院系名称

院系名称 院系名称，同上，按照入学的培养计划中学科自行填写，具体院系名称不是本文档范畴。

```

caffil
eaaffil
\heusetup{
  caffil={动力与能源工程学院},
  eaaffil={\emultiline[t]{School of Power and Energy Engineering}},
}
```

注意：个别学院英文名过长，使用以上方法自动换行。

3.4.6 专业名称

专业名称 专业名称，同上，按照入学的培养计划中学科自行填写，具体名称不是本文档范畴。

```

csubject
esubject
\heusetup{
  csubject={动力工程},
  esubject={Engineering of Power Energy},
}
```

3.4.7 导师

导师

直接导师。

```

csupervisor
esupervisor
cprofessional
creviewer
\heusetup{
  csupervisor={导师~教授},
  esupervisor={Supervisor},
  cprofessional={职称（本科）},
  creviewer={论文主审人}
}

```

副导师

副指导教师。

```

cassosupervisor
eassosupervisor
\heusetup{
  cassosupervisor={副导师~副教授},
  eassosupervisor={2nd Boss}
}

```

联合导师

硕士生联合指导教师，博士生联合导师。

```

ccosupervisor
ecosupervisor
\heusetup{
  ccosupervisor={联合导师~教授},
  ecosupervisor={3rd Boss}
}

```

3.4.8 日期

日期

日期内容包括封面日期、论文提交日期和论文答辩日期等。其中论文封面日期默认为当前时间，也可以自己指定。论文提交日期和论文答辩日期需要手工设置。

```

cdate
csubmitdate
coralexdate
edate
\heusetup{
  cdate={中文日期},
  csubmitdate={论文提交日期},
  coralexdate={论文答辩日期},
  edate={English Date}
}

```

3.4.9 学生类型

学生类型

非全日制或专业学位申请者（`profdegree=true`），如：同等学力人员、工程硕士、工商管理硕士、高级管理人员工商管理硕士、公共管理硕士、中职教师、高校教师等，具体要求按照入学的培养计划中学科自行填写，具体名称不是本文档范畴。同时根据专业学位论文扉页格式要求，还需要通过 `researchtype` 参数设置论文研究类型。`profdegree` 和 `researchtype` 通过模板选项设置。`cstudenttype` 和 `estudenttype` 在封面定义文件 `back/cover.tex` 文件中通过 `\heusetup` 设置。

```

\heusetup{
  cstudenttype={工程硕士},
  estudenttype={Master of Art},
}

```

3.4.10 学号

cstudentid ^{学号}

学号，具体要求按照入学的培养计划中学科自行填写。

```
\heusetup{
  cstudentid={9527},
}
```

3.4.11 摘要

摘要正文

说明：摘要正文只能用环境命令的形式，不支持 `\heusetup`。

cabstrack (env.)

eabstract (env.)

```
\begin{cabstrack}
  摘要请写在这里...
\end{cabstrack}

\begin{eabstract}
  Here comes the abstract in English...
\end{eabstract}
```

关键词

关键词用英文逗号分割写入相应的命令中，模板会解析各关键词并生成符合不同论文格式要求的关键词格式。

ckeywords

ekeywords

```
\heusetup{
  ckeywords={关键词 1, 关键词 2},
  ekeywords={keyword 1, keyword 2}
}
```

3.4.12 符号对照表

denotation (env.)

主要符号表环境，单独在文件 `front/denotation.tex` 中。跟据《哈尔滨工程大学研究生学位论文撰写规范》示例中要求，我校符号表是 `table` 环境，示例文件如下，由于我校要求博士论文图表标题是双语，所以任何对单个标题的全局格式调整都会影响到双语标题，所以这里使用 `\vspace`，具体见实现细节中的描述。

```
\begin{denotation}
\begin{table}[h] %此处最好是h
\caption{国际单位制中具有专门名称的导出单位}
\vspace{0.5em}\centering\wuhao
\begin{tabular}{ccccc}
\toprule[1.5pt]
量的名称&单位名称&单位符号&其它表示实例\\
\midrule[1pt]
频率&赫[兹]&Hz&s-1\\
\bottomrule[1.5pt]
\end{tabular}
\end{table}
\end{denotation}
```

3.4.13 目录

目录不需要用户干预，自动生成，具体命令已经写在 `main.tex` 中。

3.5 正文

3.5.1 图和表

哈尔滨工程大学博士毕业论文要求使用中英双语图题、表题，这增加了维护难度。因为现有唯一的方法是在已有的图题或表题的基础上再添加一行英语图题或表题。两个题之间的距离具体多少不在《哈尔滨工程大学研究生学位论文撰写规范》中要求。目前的方法是用户手动调节该距离。关于图题《哈尔滨工程大学研究生学位论文撰写规范》和《哈尔滨工程大学本科生毕业论文撰写规范》只规定了居中，并没有规定居中对其。然而评审老师很多喜欢居中且居中对齐。模板默认选项是居中且居中对齐，如果不喜欢居中对齐，那么需要在 main.tex 的文档类选项中设置选项 `capcenterlast=false`。详细方法见前文的介绍。《哈尔滨工程大学研究生学位论文撰写规范》,《哈尔滨工程大学本科生毕业论文撰写规范》规定：“每个图均应有图题（由图序和图名组成），图题不宜有标点符号，图名在图序之后空 1 个半角字符排写。图序按章编排，如第 1 章第一个插图的图号为“图 1.1”。图题置于图下，硕士论文只用中文，博士论文用中、英两种文字，居中书写，中文在上，要求中文用宋体 5 号字，英文用 Times New Roman 5 号字。有图注或其它说明时应置于图题之上。引用图应注明出处，在图题右上角加引用文献号。图中若有分图时，分图题置于分图之下或图题之下，可以只用中文书写，分图号用 (a)、(b) 等表示。图中各部分说明应采用中文（引用的外文图除外）或数字符号，各项文字说明置于图题之上（有分图时，置于分图题之上）。图中文字用宋体、Times New Roman 字体，字号尽量采用 5 号字（当字数较多时可用小 5 号字，以清晰表达为原则，但在一个插图内字号要统一）。同一图内使用文字应统一。图表中物理量、符号用斜体。”单双语图题的方法如下，注释中说明。

```
\begin{figure}[htpb]
\centering
\includegraphics[width = 0.4\textwidth]{golfer}
\bicaption[golfer1]{}{注意图中文字尽量用五号字}
}{Fig.$\!$}{The person playing golf}
\end{figure}
```

单张单图题的格式如下，

```
\begin{figure}[h]
\centering
\includegraphics[width = 0.4\textwidth]{golfer}
\caption{注意图中文字字号尽量用五号字}
\end{figure}
```

并排图例。

```
\begin{figure}[htbp]
\centering
\begin{minipage}{0.4\textwidth}
\centering
\includegraphics[width=\textwidth]{golfer}
\bicaption[golfer2]{}{打高尔夫球的人}{Fig.$\!$}{The person playing golf}
\end{minipage}
\begin{minipage}{0.4\textwidth}
\centering
\includegraphics[width=\textwidth]{golfer}
```

```
\bicaption[golfer3]{}{打高尔夫球的人}{Fig.$\!$}{The person playing golf}
\end{minipage}
\end{figure}
```

子图图例。

```
\begin{figure}[htbp]
\centering
\subfigure{\label{golfer41}}{\addtocounter{subfigure}{-2}
\subfigure[The person playing golf]{\subfigure[打高尔夫球的人~1]{\
includegraphics[width=0.4\textwidth]{golfer}}}}
\subfigure{\label{golfer42}}{\addtocounter{subfigure}{-2}
\subfigure[The person playing golf]{\subfigure[打高尔夫球的人~2]{\
includegraphics[width=0.4\textwidth]{golfer}}}}
\bicaption[golfer4]{}{打高尔夫球的人}{Fig.$\!$}{The person playing golf}
\end{figure}
```

表格示例，表格中的字体是可以自行调整的。

```
\begin{table}[htbp]
\bicaption[table1]{}{符合研究生院绘图规范的表格}{Table$\!$}{Table in agreement of
the standard from graduate school}
\vspace{0.5em}\centering\wuhao
\begin{tabular}{ccccc}
\toprule[1.5pt]
$D$(in) & $P_u$(lbs) & $u_u$(in) & $\beta$ & $G_f$(psi.in)\
\midrule[1pt]
5 & 269.8 & 0.000674 & 1.79 & 0.04089\
10 & 421.0 & 0.001035 & 3.59 & 0.04089\
20 & 640.2 & 0.001565 & 7.18 & 0.04089\
\bottomrule[1.5pt]
\end{tabular}
\end{table}
```

因为长表格不是浮动体，不会自动调整位置、也不会自动调整字体大小，一切都要手动设置。设置起来特别繁琐，建议尽量不要使用长表格。

```
\ltfontsize{\dawu[1.667]} %设置表格内字体行间距
\dawu[1.667]\begin{longtable}{ccc} % 注意此处设置的是表格线距离
\longbionenumcaption{}{\wuhao 中国省级行政单位一览 %此处要添加字体设置}
\label{table2}{Table$\!$}{\wuhao Overview of the provincial
administrative
unit of China}{-0.5em}{3.15bp}\ %注意后两个参数分别是中英标题间距、标题和表格的间
距。
%\caption{\wuhao 中国省级行政单位一览}\[1em] %注意此处是标题和表格间距，这行
%是单语标题
\toprule[1.5pt] 名称 & 简称 & 省会或首府 \ \ \midrule[1pt]
\endfirsthead
\multicolumn{3}{r}{表~\thetable (续表)}\vspace{0.5em}\
\toprule[1.5pt] 名称 & 简称 & 省会或首府 \ \ \midrule[1pt]
\endhead
\bottomrule[1.5pt]
\endfoot
```



```

北京市 & 京 & 北京\\
天津市 & 津 & 天津\\
河北省 & 冀 & 石家庄市\\
山西省 & 晋 & 太原市\\
内蒙古自治区 & 蒙 & 呼和浩特市\\
辽宁省 & 辽 & 沈阳市\\
吉林省 & 吉 & 长春市\\
黑龙江省 & 黑 & 哈尔滨市\\
上海市 & 沪/申 & 上海\\
江苏省 & 苏 & 南京市\\
浙江省 & 浙 & 杭州市\\
安徽省 & 皖 & 合肥市\\
福建省 & 闽 & 福州市\\
江西省 & 赣 & 南昌市\\
山东省 & 鲁 & 济南市\\
河南省 & 豫 & 郑州市\\
湖北省 & 鄂 & 武汉市\\
湖南省 & 湘 & 长沙市\\
广东省 & 粤 & 广州市\\
广西壮族自治区 & 桂 & 南宁市\\
海南省 & 琼 & 海口市\\
重庆市 & 渝 & 重庆\\
四川省 & 川/蜀 & 成都市\\
贵州省 & 黔/贵 & 贵阳市\\
云南省 & 云/滇 & 昆明市\\
西藏自治区 & 藏 & 拉萨市\\
陕西省 & 陕/秦 & 西安市\\
甘肃省 & 甘/陇 & 兰州市\\
青海省 & 青 & 西宁市\\
宁夏回族自治区 & 宁 & 银川市\\
新疆维吾尔自治区 & 新 & 乌鲁木齐市\\
香港特别行政区 & 港 & 香港\\
澳门特别行政区 & 澳 & 澳门\\
台湾省 & 台 & 台北市\\
\end{longtable}\normalsize %注意这里要恢复正常字体

```

3.5.2 公式

公式不做介绍，与正常用法一致。

3.5.3 数学环境

HEUThesis 定义了常用的数学环境：

axiom	theorem	definition	proposition	lemma	conjecture	
公理	定理	定义	命题	引理	猜想	
proof	corollary	example	exercise	assumption	remark	problem
证明	推论	例子	练习	假设	注释	问题

比如:

```
\begin{definition}
  道千乘之国，敬事而信，节用而爱人，使民以时。
\end{definition}
```

产生（自动编号）:

定义 1.1 道千乘之国，敬事而信，节用而爱人，使民以时。

列举出来的数学环境毕竟是有限的，如果想用胡说这样的数学环境，那么可以定义:

```
\newtheorem{nonsense}{胡说}[chapter]
```

然后这样使用:

```
\begin{nonsense}
  契丹武士要来中原夺武林秘笈。——慕容博
\end{nonsense}
```

产生（自动编号）:

胡说 1.1 契丹武士要来中原夺武林秘笈。——慕容博

3.5.4 算法

我校算法不在规范中要求，且每个人都有自己的算法格式喜好，大家最好采用大家普遍接收的方式，做到美观、协调就可以。

3.5.5 引用参考文献

`\inlinecite` 学校要求的参考文献引用有两种模式:(1)上标模式。比如“同样的工作有很多^[1,2]...”。(2)正文模式。比如“文 [3] 中详细说明了...”。其中上标模式使用远比正文模式频繁，所以为了符合使用习惯，上标模式仍然用常规的 `\cite{key}`，而 `\inlinecite{key}` 则用来生成正文模式。

关于参考文献模板推荐使用 Bib_T_EX, 关于中文参考文献需要额外增加一个 `Entry: language`, 将其设置为 `zh` 用来指示此参考文献为中文，以便 `heuthesis.bst` 处理。如:

```
@INPROCEEDINGS{cnproceed,
  author    = {王重阳 and 黄药师 and 欧阳峰 and 洪七公 and 段皇帝},
  title     = {武林高手从入门到精通},
  booktitle = {第~$N$~次华山论剑},
  year      = 2006,
  address   = {西安, 中国},
  month     = sep,
  language  = "zh",
}

@ARTICLE{cnarticle,
  AUTHOR   = "贾宝玉 and 林黛玉 and 薛宝钗 and 贾探春",
  TITLE    = "论刘姥姥食量大如牛之现实意义",
  JOURNAL  = "红楼梦杂谈",
  PAGES    = "260--266",
  VOLUME   = "224",
}
```

```
YEAR      = "1800",
LANGUAGE= "zh",
}
```

注意如果不需要引用参考文献，请删除 `main.tex` 中 `\bibliography` 开头的两行，以避免可能的编译错误。

3.5.6 列表环境

itemize (env.) 为了适合中文习惯，模板将这三个常用的列表环境用 `enumitem` 进行了纵向间距压缩。
enumerate (env.) 一方面清除了多余空间，另一方面用户可以自己指定列表环境的样式（如标签符号，缩进等）。
description (env.) 细节请参看 `enumitem` 文档，此处不再赘述。

3.6 后文

3.6.1 结论

conclusion (env.) 结论之后为后文内容。

```
\begin{conclusions}
```

学位论文的结论作为论文正文的最后一章单独排写，但不加章标题序号。

结论应是作者在学位论文研究过程中所取得的创新性成果的概要总结，不能与摘要混为一谈。博士学位论文结论应包括论文的主要结果、创新点、展望三部分，在结论中应概括论文的核心观点，明确、客观地指出本研究内容的创新性成果（含新见解、新观点、方法创新、技术创新、理论创新），并指出今后进一步在本研究方向进行研究工作的展望与设想。对所取得的创新性成果应注意从定性和定量两方面给出科学、准确的评价，分（1）、（2）、（3）…条列出，宜用“提出了”、“建立了”等词叙述。

```
\end{conclusions}
```

3.6.2 参考文献

在后文中的参考文献是自动生成的，不需要用户干预，具体命令在 `main.tex` 中有示例。

3.6.3 附录

appendix (env.) 所有的附录都插到这里来。因为附录会更改默认的 `chapter` 属性，而后面的个人简历又需要恢复，所以实现为环境可以保证全局的属性不受影响。

```
\begin{appendix}
\input{back/appA.tex}
\end{appendix}
```

3.6.4 所发表文章

publication (env.) 虽然在《哈尔滨工程大学研究生学位论文撰写规范》《哈尔滨工程大学本科毕业论文撰写规范》中都没有明确规定此处的格式，此处基本按照参考文献的要求进行设置。

```

\begin{publication}
\noindent\textbf{(一) 发表的学术论文}
\begin{publist}
\item XXX, XXX. Static Oxidation Model of Al-Mg/C Dissipation Thermal
Protection Materials[J]. Rare Metal Materials and Engineering, 2010, 39(Suppl
. 1): 520-524. (SCI~收录, IDS号为~669JS, IF=0.16)
\item XXX, XXX. 精密超声振动切削单晶铜的计算机仿真研究[J]. 系统仿真学报, 2007, 19(4):
738-741, 753. (EI~收录号: 20071310514841)
\item XXX, XXX. 局部多孔质气体静压轴向轴承静态特性的数值求解[J]. 摩擦学学报, 2007(1):
68-72. (EI~收录号: 20071510544816)
\item XXX, XXX. 硬脆光学晶体材料超精密切削理论研究综述[J]. 机械工程学报, 2003, 39(8):
15-22. (EI~收录号: 2004088028875)
\item XXX, XXX. 基于遗传算法的超精密切削加工表面粗糙度预测模型的参数辨识以及切削参数优化[J
]. 机械工程学报, 2005, 41(11): 158-162. (EI~收录号: 2006039650087)
\item XXX, XXX. Discrete Sliding Mode Control with Fuzzy Adaptive Reaching Law
on 6-PEES Parallel Robot[C]. Intelligent System Design and Applications,
Jinan, 2006: 649-652. (EI~收录号: 20073210746529)
\end{publist}

\noindent\textbf{(二) 申请及已获得的专利(无专利时此项不必列出)}
\begin{publist}
\item XXX, XXX. 一种温热外敷药制备方案: 中国, 88105607.3[P]. 1989-07-26.
\end{publist}

\noindent\textbf{(三) 参与的科研项目及获奖情况}
\begin{publist}
\item XXX, XXX. XX~气体静压轴承技术研究, XX~省自然科学基金项目. 课题编号: XXXX.
\item XXX, XXX. XX~静载下预应力混凝土房屋结构设计统一理论. 黑江省科学技术二等奖, 2007.
\end{publist}
%\vfill
%\hangafter=1\hangindent=2em\noindent
%\setlength{\parindent}{2em}
\end{publication}

```

3.6.5 索引

ceindex (*env.*) 我校要求中英文双语索引。后文中的自动索引实际上不需要用户干预。

```

\begin{ceindex}
%如果想要手动加索引, 注释掉以下这一行, 用wordlist环境
\printsubindex*
\end{ceindex}

```

手工添加索引的方法不推荐, 模板中将去除该功能。

3.6.6 致谢声明

acknowledgement (*env.*) 把致谢做成一个环境更好一些, 直接往里面写感谢的话就可以啦!

```

\begin{acknowledgement}
...

```

```
感谢\heu\LaTeX\ 论文模板\heuthesis\ !
\end{acknowledgement}
```

3.6.7 简历

resume (*env.*) 个人简历。实际上，致谢和个人简历是自由发挥的地区，字体，文体，格式，内容，完全自己决定。

```
\begin{resume}
XXXX~年~XX~月~XX~日出生于~XXXX。

XXXX~年~XX~月考入~XX~大学~XX~院（系）XX~专业，XXXX~年~XX~月本科毕业并获得~XX~学学士学位。

XXXX~年~XX~月-----XXXX~年~XX~月在~XX~大学~XX~院（系）XX~学科学习并获得~XX~学硕士学位。

XXXX~年~XX~月-----XXXX~年~XX~月在~XX~大学~XX~院（系）XX~学科学习并获得~XX~学博士学位。

获奖情况：如获三好学生、优秀团干部、x~奖学金等（不含科研学术获奖）。

工作经历：
\end{resume}
```

3.6.8 授权

\authorization 授权页中的签名和日期是需要手写，不需要人工干预。模板中提供了未签名的空白论文原创性声明和授权页 `authorization.pdf`，可以使用签字后的扫描版文件进行替换。

```
\authorization[authorization.pdf]
```

3.7 其它

模板的配置文件 `heuthesisbook.cfg` 中定义了很多固定词汇，一般无须修改。如果有特殊需求，推荐在导言区使用 `\renewcommand`。

4 实现细节

4.1 基本信息

```

1 < *bst>
2 ENTRY                                     % class Entry {
3 {                                         % public:
4   author                                 %   String author;
5   editor                                %   String editor;
6   translator                            %   String translator;
7   title                                 %   String title;
8   edition                               %   String edition;
9   address                               %   String address;
10  publisher                             %   String publisher;
11  pages                                 %   String pages;
12  year                                  %   String year;
13  date                                  %   String date;
14  modifydate                           %   String modifydate;
15  citedate                              %   String citedate;
16  url                                   %   String url;
17  doi                                   %   String doi;
18  language                              %   String language;
19  booktitle                             %   String booktitle;
20  journal                               %   String journal;
21  chapter                               %   String chapter;
22  series                                %   String series;
23  volume                                %   String volume;
24  number                                %   String number;
25  version                               %   String version;
26  month                                 %   String month;
27  school                                %   String school;
28  institution                           %   String institution;
29  organization                          %   String organization;
30  type                                  %   String type;
31  howpublished                          %   String howpublished;
32  eid                                   %   String eid;
33  key                                   %   String key;
34  country                               %   String country;
35  patentid                              %   String patentid;
36  media                                 %   String media;
37 } {                                     %   // declare integer variables
38   required                             %   int required; // withther the bi
39 } {                                     %   // declare String variables
40   label                                 %   String label;           // label
41   mark                                 %   String mark;             // mark
42                                     %   // there is ahidden entry variak
43                                     %   String sort_key;
44 }                                     % }
45                                     %
46 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

```

47                                     %
48 INTEGERS {                         % // declare global int variables
49   entry.count                      % static int entry_count;           //
50   longest.label.width              % static int longest_label_width; //
51   i                                % static int i;
52   j                                % static int j;
53   k                                % static int k;
54 }                                  %
55                                   %
56 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
57                                   %
58 STRINGS {                          % // declare global String variables
59   longest.label                    % static String longest_label; //
60   s                                % static String s;
61   t                                % static String t;
62 }                                  %
63                                   %
64 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
65
66 % define global static constants
67 FUNCTION {true}                    {#1}
68 FUNCTION {false}                   {#0}
69 FUNCTION {debug.enabled}            {true}
70 FUNCTION {cap.volume.en}            {"Vol~"}
71 FUNCTION {cap.volume.zh}            {" 卷"}
72 FUNCTION {cap.edition.en}           {"~ed"}
73 FUNCTION {cap.edition.zh}           {" 版"}
74 FUNCTION {cap.anonymous.en}         {"Anon"}
75 FUNCTION {cap.anonymous.zh}         {" 佚名"}
76 FUNCTION {cap.no.address.en}        {"[S.l.]"}
77 FUNCTION {cap.no.address.zh}        {"[出版地不详]"}
78 FUNCTION {cap.no.publisher.en}      {"[s.n.]"}
79 FUNCTION {cap.no.publisher.zh}      {"[出版者不详]"}
80 FUNCTION {cap.et.al.en}             {" , et~al"}
81 FUNCTION {cap.et.al.zh}             {" , 等"}
82 FUNCTION {cap.translate.en}         {"~trans"}
83 FUNCTION {cap.translate.zh}         {" 译"}
84 FUNCTION {cap.doi.url}              {"http://dx.doi.org/"}
85 FUNCTION {cap.st.en}                {"st"}
86 FUNCTION {cap.nd.en}                {"nd"}
87 FUNCTION {cap.rd.en}                {"rd"}
88 FUNCTION {cap.th.en}                {"th"}
89
90 FUNCTION {cap.space}                {" "}
91 FUNCTION {cap.period}                {"\@. "}
92 FUNCTION {cap.comma}                {"\@, "}
93 FUNCTION {cap.colon}                {"\textnormal{:}"}
94 FUNCTION {cap.double.slash}         {" //\thinspace{ }"}
95 FUNCTION {cap.dash}                 {"\textnormal{-}"}
96

```

```

97 % Predefined latex command used to format the style of bibitems
98 FUNCTION {env.bibbegin} { "\begin{thebibliography}" }
99 FUNCTION {env.bibend} { "\end{thebibliography}" }
100 FUNCTION {cmd.bibauthor} { "\providecommand{\bibauthor}[1]{#1}" }
101 FUNCTION {cmd.bibeditor} { "\providecommand{\bibeditor}[1]{#1}" }
102 FUNCTION {cmd.bibtranslator} { "\providecommand{\bibtranslator}[1]{#1}" }
103 FUNCTION {cmd.bibttitle} { "\providecommand{\bibttitle}[1]{#1}" }
104 FUNCTION {cmd.bibbooktitle} { "\providecommand{\bibbooktitle}[1]{#1}" }
105 FUNCTION {cmd.bibjournal} { "\providecommand{\bibjournal}[1]{#1}" }
106 FUNCTION {cmd.bibmark} { "\providecommand{\bibmark}[1]{\mbox{#1}}" }
107 FUNCTION {cmd.bibcountry} { "\providecommand{\bibcountry}[1]{#1}" }
108 FUNCTION {cmd.bibpatentid} { "\providecommand{\bibpatentid}[1]{#1}" }
109 FUNCTION {cmd.bibedition} { "\providecommand{\bibedition}[1]{#1}" }
110 FUNCTION {cmd.biborganization} { "\providecommand{\biborganization}[1]{#1}" }
111 FUNCTION {cmd.bibaddress} { "\providecommand{\bibaddress}[1]{#1}" }
112 FUNCTION {cmd.bibpublisher} { "\providecommand{\bibpublisher}[1]{#1}" }
113 FUNCTION {cmd.bibinstitution} { "\providecommand{\bibinstitution}[1]{#1}" }
114 FUNCTION {cmd.bibschool} { "\providecommand{\bibschooll}[1]{#1}" }
115 FUNCTION {cmd.bibvolume} { "\providecommand{\bibvolume}[1]{#1}" }
116 FUNCTION {cmd.bibnumber} { "\providecommand{\bibnumber}[1]{#1}" }
117 FUNCTION {cmd.bibversion} { "\providecommand{\bibversion}[1]{#1}" }
118 FUNCTION {cmd.bibpages} { "\providecommand{\bibpages}[1]{#1}" }
119 FUNCTION {cmd.bibmodifydate} { "\providecommand{\bibmodifydate}[1]{#1}" }
120 FUNCTION {cmd.bibcitedate} { "\providecommand{\bibcitedate}[1]{#1}" }
121 FUNCTION {cmd.bibyear} { "\providecommand{\bibyear}[1]{#1}" }
122 FUNCTION {cmd.bibdate} { "\providecommand{\bibdate}[1]{#1}" }
123 FUNCTION {cmd.biburl} { "\providecommand{\biburl}[1]{\newline\url{#1}" }
124
125 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
126 %
127 FUNCTION {log.str} { % void Entry::log_str(String value, S
128   debug.enabled { % if (debug_enabled == 1) {
129     "DEBUG: " swap$ * " - '" * % message = "DEBUG: " + message +
130     swap$ * % message = message + value;
131     "' * % message = message + "'";
132     top$ % log(message);
133   } { % } else {
134     pop$ pop$ % return;
135   } if$ % }
136 } % }
137 %
138 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
139 %
140 FUNCTION {log.int} { % int Entry::log_int(int value, Strin
141   debug.enabled { % if (debug_enabled == 1) {
142     "DEBUG: " swap$ * " - " * % message = "DEBUG: " + message +
143     swap$ int.to.str$ * % message = message + int_to_str
144     top$ % log(message);
145   } { % } else {
146     pop$ pop$ % return;

```



```

147 } if$ % }
148 } % }
149 %
150 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
151 %
152 FUNCTION {not} { % int Entry::not(int x) {
153 { % if (x == 1) {
154 false % return false;
155 } { % } else {
156 true % return true;
157 } if$ % }
158 } % }
159 %
160 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
161 %
162 FUNCTION {and} { % int Entry::and(int x, int y) {
163 { % if (y == 1) {
164 skip$ % return x;
165 } { % } else {
166 pop$ false % return false;
167 } if$ % }
168 } % }
169 %
170 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
171 %
172 FUNCTION {or} { % int Entry::or(int x, int y) {
173 { % if (y == 1) {
174 pop$ true % return true;
175 } { % } else {
176 skip$ % return x;
177 } if$ % }
178 } % }
179 %
180 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
181 % // calculate the length in characters
182 % // We need this function since tex
183 % // the length in characters.
184 INTEGERS {length.i} % static int length_i;
185 FUNCTION {length} { % int Entry::length(String str) {
186 duplicate$ empty$ { % if (empty(str)) {
187 pop$ #0 % return 0;
188 } { % } else {
189 #1 'length.i := % length_i = 1;
190 false % int stop = false;
191 {not} { % while (! stop) {
192 duplicate$ length.i #1 substring$ % String tmp = substring(str, 1,
193 "" = { % if (tmp == "") {
194 true % stop = true;
195 } { % } else {
196 length.i #1 + 'length.i := % length_i = length_i + 1;

```

```

197         false                                %         stop = false;
198     } if$                                     %     }
199 } while$                                     % }
200 pop$ length.i #1 -                           %     return length_i - 1;
201 } if$                                         % }
202 }                                             % }
203                                             %
204 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
205                                             %
206 FUNCTION {is.digit} {                        % int Entry::is_digit(String ch) {
207     chr.to.int$                               %     int ascii = chr_to_int(ch);
208     duplicate$ "0" chr.to.int$ < {           %     if (ascii < chr_to_int("0")) {
209         pop$ false                           %         return false;
210     } {                                       %     } else {
211         "9" chr.to.int$ > {                  %         if (ascii > chr_to_int("9")) {
212             false                           %             return false;
213         } {                                   %         } else {
214             true                             %             return true;
215         } if$                               %     }
216     } if$                                   % }
217 }                                             % }
218                                             %
219 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
220                                             % // test if str is a number
221 FUNCTION {is.number} {                      % int Entry::is_number(String str) {
222     duplicate$ empty$ not swap$              %     int result = (! empty(str));
223     { duplicate$ empty$ not } {              %     while (! empty(str)) {
224         duplicate$ #1 #1 substring$ is.digit { %         if (is_digit(substring(str, 1,
225             #2 global.max$ substring$        %             str = substring(str, 2, global.max$
226     } {                                       %     } else {
227         pop$ pop$ false                     %         result = false;
228         ""                                  %         str = "";
229     } if$                                   %     }
230 } while$                                   % }
231 pop$                                       %     return result;
232 }                                             % }
233                                             %
234 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
235                                             % // extract the number prefix of str
236 FUNCTION {extract.number} {                 % String Entry::extract_number(String str) {
237     duplicate$                               %     String suffix = str;
238     duplicate$ length swap$                 %     int n = length(str);
239     duplicate$ empty$                       %     int stop = empty(suffix);
240     { not } {                                %     while (! stop) {
241         duplicate$ #1 #1 substring$ is.digit { %         if (is_digit(substring(suffix,
242             #2 global.max$ substring$        %             suffix = substring(suffix, 2, global.max$
243         duplicate$ empty$                   %             stop = empty(suffix);
244     } {                                       %     } else {
245         true                                 %         stop = true;
246     } if$                                   %     }

```

```

247 } while$ % }
248 length - % int n = n - length(suffix);
249 #1 swap$ substring$ % return substring(str, 1, n);
250 } % }
251 %
252 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
253 %
254 FUNCTION {get.last.chr} { % String Entry::get_last_chr(String s
255 duplicate$ length % int n = length(str);
256 duplicate$ #0 = { % if (n == 0) {
257 pop$ % return str;
258 } { % } else {
259 #1 substring$ % return substring(str, n, 1);
260 } if$ % }
261 } % }
262 %
263 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
264 %
265 FUNCTION {get.ordinal.suffix.en} { % String Entry::get_ordinal_suffix_en
266 duplicate$ "1" = { % if (num == "1") {
267 pop$ cap.st.en % return cap_st_en;
268 } { % } else {
269 duplicate$ "2" = { % if (num == "2") {
270 pop$ cap.nd.en % return cap_nd_en;
271 } { % } else {
272 duplicate$ "3" = { % if (num == "3") {
273 pop$ cap.rd.en % return cap_rd_en;
274 } { % } else {
275 pop$ cap.th.en % return cap_th_en;
276 } if$ % }
277 } if$ % }
278 } if$ % }
279 } % }
280 %
281 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
282 %
283 FUNCTION {num.to.ordinal.en} { % String Entry::num_to_ordinal_en(Str
284 duplicate$ empty$ { % if (empty(num)) {
285 skip$ % return num;
286 } { % } else {
287 duplicate$ get.last.chr % String ch = get_last_chr(num);
288 get.ordinal.suffix.en % String str = get_ordinal_suffix
289 * % reutrnr num + str;
290 } if$ % }
291 } % }
292 %
293 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
294 %
295 STRINGS {remove.dots.result} % static String remove_dots_result;
296 %

```

```

297 FUNCTION {remove.dots} {                                % String Entry::remove_dots(String str)
298   "" 'remove.dots.result :=                               %   remove_dots_result = "";
299   { duplicate$ empty$ not } {                             %   while (! empty(str)) {
300     duplicate$ #1 #2 substring$                           %     String tmp = substring(str, 1,
301     "\." = {                                              %     if (tmp == "\.") {
302       #3 global.max$ substring$                          %       str = substring(str, 3, globa
303     } {                                                  %     } else {
304       duplicate$ #1 #1 substring$                        %       tmp = substring(str, 1, 1);
305       duplicate$ "." = {                                  %       if (tmp == ".") {
306         pop$ #2 global.max$ substring$                  %         str = substring(str, 2, glo
307       } {                                                %       } else {
308         remove.dots.result swap$ *                      %         tmp = remove_dots_result +
309         'remove.dots.result :=                          %         remove_dots_result = tmp;
310         #2 global.max$ substring$                      %         str = substring(str, 2, glo
311       } if$                                              %       }
312     } if$                                                %     }
313   } while$                                              %   }
314   pop$ remove.dots.result                               %   return remove_dots_result;
315 }                                                       % }
316                                                       %
317 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
318                                                       %
319 FUNCTION {add.brace} {                                    % String Entry::add_brace(String str)
320   "{" swap$ * "}" *                                      %   return "{" + str + "}";
321 }                                                       % }
322                                                       %
323 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
324                                                       %
325 FUNCTION {add.bracket} {                                  % String Entry::bracket(String str) {
326   "(" swap$ * ")" *                                      %   return "(" + str + ")";
327 }                                                       % }
328                                                       %
329 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
330                                                       %
331 FUNCTION {add.squarebracket} {                            % String Entry::add_squarebracket(Str
332   "[" swap$ * "]" *                                      %   return "[" + str + "]";
333 }                                                       % }
334                                                       %
335 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
336                                                       %
337 FUNCTION {add.textit} {                                    % String Entry::add_textit(String str)
338   "\textit{" swap$ * "}" *                              %   return "\textit{" + str + "}";
339 }                                                       % }
340                                                       %
341 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
342                                                       %
343 FUNCTION {add.textbf} {                                    % String Entry::add_textbf(String str)
344   "\textbf{" swap$ * "}" *                              %   return "\textbf{" + str + "}";
345 }                                                       % }
346                                                       %

```

```

347 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
348                                     % // test if str contains a dash '-'
349 FUNCTION {contain.dash} {          % int Entry::contain_dash(String str)
350   false swap$                      %   int result = false;
351   { duplicate$ empty$ not} {       %   while (! empty(str)) {
352     duplicate$ #1 #1 substring$ "-" = { %     if (substring(str, 1, 1) == "-")
353       pop$ pop$ true               %       result = true;
354       ""                           %       str = "";
355     } {                             %   } else {
356       #2 global.max$ substring$    %       str = substring(str, 2, global.max$)
357     } if$                           %   }
358   } while$                         % }
359   pop$                             %   return result;
360 }                                  % }
361                                   %
362 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
363                                     % // extract the substring before the dash
364                                     % // returns the string itself if no dash
365 FUNCTION {extract.before.first.dash} { % String Entry::extract_before_first_dash(String str)
366   duplicate$                       %   String suffix = str;
367   duplicate$ length swap$          %   int n = length(str);
368   duplicate$ empty$                %   int stop = empty(suffix);
369   { not } {                         %   while (! stop) {
370     duplicate$ #1 #1 substring$ "-" = { %     if (substring(suffix, 1, 1) == "-")
371       true                           %       stop = true;
372     } {                             %   } else {
373       #2 global.max$ substring$      %     suffix = substring(suffix, 2, global.max$)
374       duplicate$ empty$              %     stop = empty(suffix);
375     } if$                           %   }
376   } while$                         % }
377   length -                          %   int n = n - length(suffix);
378   #1 swap$ substring$              %   return substring(str, 1, n);
379 }                                  % }
380                                   %
381 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
382                                     % // extract the substring after the dash
383                                     % // returns the string itself if no dash
384 FUNCTION {extract.after.first.dash} { % String Entry::extract_after_first_dash(String str)
385   duplicate$                       %   String suffix = str;
386   duplicate$ empty$                %   int stop = empty(suffix);
387   { not } {                         %   while (! stop) {
388     duplicate$ #1 #1 substring$ "-" = { %     if (substring(suffix, 1, 1) == "-")
389       true                           %       stop = true;
390     } {                             %   } else {
391       #2 global.max$ substring$      %     suffix = substring(suffix, 2, global.max$)
392       duplicate$ empty$              %     stop = empty(suffix);
393     } if$                           %   }
394   } while$                         % }
395   duplicate$ empty$ {              %   if (empty(suffix)) {
396     pop$                            %     return str;

```

```

397 } { % } else {
398     swap$ pop$ #2 global.max$ substring$ %     return substring(suffix, 2, glo
399 } if$ % }
400 } % }
401 %
402 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
403 % // extract the substring after the
404 % // returns the empty string if no '
405 FUNCTION {extract.after.last.dash} { % String Entry::extract_after_last_da
406     duplicate$ contain.dash not { %     if (! contain_dash(str)) {
407         pop$ "" %         return "";
408     } { %     } else {
409         {duplicate$ contain.dash} { %         while (contain_dash(str)) {
410             extract.after.first.dash %             str = extract_after_first_da
411         } while$ %         }
412         %         return str;
413     } if$ %     }
414 } % }
415 %
416 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
417 %
418 FUNCTION {trim.start} { % String Entry::trim_start(String str)
419     {duplicate$ #1 #1 substring$ " " =} { %     while (substring(str, 1, 1) == "
420         #2 global.max$ substring$ %         str = substring(str, 2, global_
421     } while$ %     }
422 %     return str;
423 } % }
424 %
425 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
426 %
427 FUNCTION {trim.end} { % String Entry::trim_end(String str)
428     {duplicate$ get.last.chr " " =} { %     while (get_last_chr(str) == " ")
429         duplicate$ length #1 - %         int n = length(str) - 1;
430         #1 swap$ substring$ %         str = substring(str, 1, n);
431     } while$ %     }
432 %     return str;
433 } % }
434 %
435 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
436 %
437 FUNCTION {trim} { % String Entry::trim(String str) {
438     trim.start %     str = trim_start(str);
439     trim.end %     return trim_end(str);
440 } % }
441 %
442 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
443 %
444 FUNCTION {start.bibitem} { % void Entry::start_bibitem() {
445     newline$ %     writeln();
446     "\bibitem{ cite$ * "}" * write$ %     write("\bibitem{" + this.cite + "

```

```

447  newline$                                %   writeln();
448 }                                         % }
449                                           %
450 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
451                                           %
452 FUNCTION {end.bibitem} {                  % void Entry::end_bibitem() {
453   cap.period write$                        %   write(cap_period);
454   newline$                                %   writeln();
455 }                                         % }
456                                           %
457 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
458                                           %
459 FUNCTION {is.in.chinese} {                % int Entry::is_in_chinese() {
460   language empty$ {                      %   if (empty(this.language)) {
461     false                                  %     return false;
462   } {                                     %   } else {
463     language "zh" = {                    %     if (this.language == "zh") {
464       true                                %       return true;
465     } {                                   %     } else {
466       false                              %       return false;
467     } if$                                %     }
468   } if$                                  %   }
469 }                                         % }
470                                           %
471 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
472                                           %
473 FUNCTION {is.online} {                   % int Entry::is_online() {
474   url empty$ not {                       %   if (! empty(this.url)) {
475     true                                  %     return true;
476   } {                                     %   } else {
477     doi empty$ not {                    %     if (! empty(this.doi)) {
478       true                              %       return true;
479     } {                                   %     } else {
480       false                             %       return false;
481     } if$                                %     }
482   } if$                                  %   }
483 }                                         % }
484                                           %
485 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
486                                           %
487 FUNCTION {set.mark} {                    % void Entry::set_mark(String mark) {
488   'mark :=                                %   this.mark = mark;
489   is.online {                             %   if (is_online()) {
490     mark "/OL" * 'mark :=               %     this.mark = this.mark + "/OL";
491   } {                                     %   } else {
492     media empty$ not {                  %     if (! empty(this.media)) {
493       mark "/" * media * 'mark :=       %     this.mark = this.mark + "/" +
494     } 'skip$ if$                         %     }
495   } if$                                  %   }
496 }                                         % }

```

```

497                                     %
498 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
499                                     %
500 FUNCTION {cap.volume} {               % String Entry::cap_volume() {
501   is.in.chinese {                     %   if (is_in_chinese()) {
502     cap.volume.zh                     %     return cap_volume_zh;
503   } {                                 %   } else {
504     cap.volume.en                     %     return cap_volume_en;
505   } if$                               %   }
506 }                                     % }
507                                     %
508 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
509                                     %
510 FUNCTION {cap.edition} {              % String Entry::cap_edition() {
511   is.in.chinese {                     %   if (is_in_chinese()) {
512     cap.edition.zh                    %     return cap_edition_zh;
513   } {                                 %   } else {
514     cap.edition.en                    %     return cap_edition_en;
515   } if$                               %   }
516 }                                     % }
517                                     %
518 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
519                                     %
520 FUNCTION {cap.anonymous} {            % String Entry::cap_anonymous() {
521   is.in.chinese {                     %   if (is_in_chinese()) {
522     cap.anonymous.zh                  %     return cap_anonymous_zh;
523   } {                                 %   } else {
524     cap.anonymous.en                  %     return cap_anonymous_en;
525   } if$                               %   }
526 }                                     % }
527                                     %
528 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
529                                     %
530 FUNCTION {cap.no.address} {           % String Entry::cap_no_address() {
531   is.in.chinese {                     %   if (is_in_chinese()) {
532     cap.no.address.zh                 %     return cap_no_address_zh;
533   } {                                 %   } else {
534     cap.no.address.en                 %     return cap_no_address_en;
535   } if$                               %   }
536 }                                     % }
537                                     %
538 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
539                                     %
540 FUNCTION {cap.no.publisher} {         % String Entry::cap_no_publisher() {
541   is.in.chinese {                     %   if (is_in_chinese()) {
542     cap.no.publisher.zh               %     return cap_no_publisher_zh;
543   } {                                 %   } else {
544     cap.no.publisher.en               %     return cap_no_publisher_en;
545   } if$                               %   }
546 }                                     % }

```



```

547                                     %
548 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
549                                     %
550 FUNCTION {cap.et.al} {               % String Entry::cap_et_al() {
551   is.in.chinese {                     %   if (is_in_chinese()) {
552     cap.et.al.zh                       %     return cap_et_al_zh;
553   } {                                 %   } else {
554     cap.et.al.en                       %     return cap_et_al_en;
555   } if$                               %   }
556 }                                     % }
557                                     %
558 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
559                                     %
560 FUNCTION {cap.translate} {           % String Entry::cap_translate() {
561   is.in.chinese {                     %   if (is_in_chinese()) {
562     cap.translate.zh                   %     return cap_translate_zh;
563   } {                                 %   } else {
564     cap.translate.en                   %     return cap_translate_en;
565   } if$                               %   }
566 }                                     % }
567                                     %
568 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
569                                     %
570 FUNCTION {format.bibinfo} {          % String Entry::format_bibinfo(String
571   swap$ add.brace swap$               %   info = add_brace(info);
572   "\bib" swap$ * swap$ *              %   return "\bib" + type + info;
573 }                                     % }
574                                     %
575 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
576 INTEGERS { nameindex namecount }     % static int nameindex, namecount;
577 STRINGS  { namelist nameformat }     % static String namelist, nameformat;
578 STRINGS  { firstname lastname jname vonname} % static String firstname, lastname,
579                                     %
580 FUNCTION {format.names} {            % String Entry::format_names(String r
581   'namelist :=                        %   namelist = names;
582   namelist num.names$ 'namecount :=  %   namecount = num_names(namelist);
583   ""                                  %   String result = "";
584   #0 'nameindex :=                   %   nameindex = 0;
585   {nameindex namecount < nameindex #3 < and} { %   while ((nameindex < namecount) &
586     nameindex #1 + 'nameindex :=      %     nameindex = nameindex + 1;
587     nameindex #1 > {                  %     if (nameindex > 1) {
588       cap.comma *                     %       result = result + cap_comma;
589     } 'skip$ if$                      %     }
590     namelist nameindex "{vv}" format.name$ %   String tmp = format_name(nameli
591     'vonname :=                       %   vonname = tmp;
592     namelist nameindex "{jj}" format.name$ %   tmp = format_name(namelist, nam
593     remove.dots 'jname :=             %   jname = remove_dots(tmp);
594     namelist nameindex "{f}" format.name$ %   tmp = format_name(namelist, nam
595     remove.dots                       %   tmp = remove_dots(tmp);
596     'firstname :=                     %   firstname = change_case(tmp, "u

```

```

597     namelist nameindex "{11}" format.name$           %      tmp = format_name(namelist, nam
598     'lastname :=                                     %      lastname = change_case(tmp, "u"
599     jrname empty$ not {                               %      if (! empty(jrname)) {
600         jrname * " " *                               %          result = result + jrname + "
601     } 'skip$ if$                                       %      }
602     vonname empty$ not {                             %      if (! empty(vonname)) {
603         vonname * " " *                               %          result = result + vonname + "
604     } 'skip$ if$                                       %      }
605     lastname empty$ not {                             %      if (! empty(lastname)) {
606         lastname * " " *                               %          result = result + lastname +
607     } 'skip$ if$                                       %      }
608     firstname empty$ not {                           %      if (! empty(firstname)) {
609         firstname * " " *                             %          result = result + firstname +
610     } 'skip$ if$                                       %      }
611     trim.end                                           %      result = trim_end(result);
612 } while$                                              %  }
613 nameindex namecount < {                             %  if (nameindex < namecount) {
614     cap.et.al *                                       %      result = result + cap_et_al();
615 } 'skip$ if$                                           %  }
616 }                                                     % }
617                                                     %
618                                                     %
619 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
620                                                     % // format English names
621 FUNCTION {format.names.en} {                          % String Entry::format_names_en(String
622     format.names                                       %     format_names(names);
623 }                                                     % }
624                                                     %
625 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
626                                                     % // format Chinese names
627 FUNCTION {format.names.zh} {                          % String Entry::format_names_zh(String
628     format.names                                       %     format_names(names);
629 }                                                     % }
630                                                     %
631 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
632                                                     %
633 FUNCTION {format.author} {                            % String Emtry::format_author(String
634     is.in.chinese {                                   %     if (is_in_chinese) {
635         format.names.zh                               %         authors = format_names_zh(autho
636     } {                                                %     } else {
637         format.names.en                               %         authors = format_names_en(autho
638     } if$                                             %     }
639     "author" format.bibinfo                           %     return format_bibinfo(authors, "a
640 }                                                     % }
641                                                     %
642 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
643                                                     %
644 FUNCTION {format.editor} {                            % String Emtry::format_author(String
645     is.in.chinese {                                   %     if (is_in_chinese) {
646         format.names.zh                               %         editors = format_names_zh(edito

```

```

647 } { % } else {
648     format.names.en % editors = format_names_en(editors)
649 } if$ % }
650 "editor" format.bibinfo % return format_bibinfo(editors, "editor")
651 } % }
652 %
653 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
654 %
655 FUNCTION {format.translator} { % String Emtry::format_translator(String t)
656     is.in.chinese { % if (is_in_chinese) {
657         duplicate$ % String names = translators;
658         format.names.zh % translators = format_names_zh(t)
659         swap$ num.names$ #3 > { % if (num_names(names) > 3) {
660             cap.translate.zh * % translators = translators + cap.translate.zh
661         } { % } else {
662             cap.comma * cap.translate.zh * % translators = translators + cap.comma
663         } if$ % }
664     } { % } else {
665         duplicate$ % String names = translators;
666         format.names.en % translators = format_names_en(t)
667         swap$ num.names$ #3 > { % if (num_names(names) > 3) {
668             cap.translate.en * % translators = translators + cap.translate.en
669         } { % } else {
670             cap.comma * cap.translate.en * % translators = translators + cap.comma
671         } if$ % }
672     } if$ % }
673 "translator" format.bibinfo % return format_bibinfo(translator, "translator")
674 } % }
675 %
676 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
677 %
678 FUNCTION {format.title} { % String Emtry::format_title(String t)
679     "title" format.bibinfo % return format_bibinfo(title, "title")
680 } % }
681 %
682 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
683 %
684 FUNCTION {format.booktitle} { % String Emtry::format_booktitle(String t)
685     "booktitle" format.bibinfo % return format_bibinfo(booktitle, "booktitle")
686 } % }
687 %
688 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
689 %
690 FUNCTION {format.mark} { % String Emtry::format_mark(String mark)
691     "[" swap$ * "]" * % mark = "[" + mark + ";
692     "mark" format.bibinfo % return format_bibinfo(mark, "mark")
693 } % }
694 %
695 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
696 %

```

```

697 FUNCTION {format.country} {                                % String Emtry::format_country(String
698   "country" format.bibinfo                                  %   return format_bibinfo(country, "c
699 }                                                            % }
700                                                            %
701 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
702                                                            %
703 FUNCTION {format.patentid} {                                % String Emtry::format_patentid(Strin
704   "patentid" format.bibinfo                                  %   return format_bibinfo(patentid, "
705 }                                                            % }
706                                                            %
707 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
708                                                            %
709 FUNCTION {format.edition} {                                  % String Emtry::format_edition(String
710   duplicate$ is.number {                                     %   if (is_number(edition)) {
711     is.in.chinese {                                         %     if (is_in_chinese()) {
712       cap.edition.zh *                                       %       edition = edition + cap_editi
713     } {                                                      %     } else {
714       num.to.ordinal.en cap.edition.en *                   %       edition = num_to_ordinal_en(e
715     } if$                                                    %     }
716   } 'skip$ if$                                              %   }
717                                                            %   // use a \mbox{} to prevent line
718   "\mbox{" swap$ * "}" *                                     %   edition = "\mbox{" + edition + "
719   "edition" format.bibinfo                                  %   return format_bibinfo(edition, "e
720 }                                                            % }
721                                                            %
722 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
723                                                            %
724 FUNCTION {format.organization} {                             % String Emtry::format_organization(S
725   "organization" format.bibinfo                             %   return format_bibinfo(organizatio
726 }                                                            % }
727                                                            %
728 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
729                                                            %
730 FUNCTION {format.address} {                                  % String Emtry::format_address(String
731   "address" format.bibinfo                                  %   return format_bibinfo(address, "a
732 }                                                            % }
733                                                            %
734 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
735                                                            %
736 FUNCTION {format.publisher} {                                % String Emtry::format_publisher(Stri
737   "publisher" format.bibinfo                                %   return format_bibinfo(publisher,
738 }                                                            % }
739                                                            %
740 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
741                                                            %
742 FUNCTION {format.institution} {                              % String Emtry::format_institution(St
743   "institution" format.bibinfo                              %   return format_bibinfo(institution
744 }                                                            % }
745                                                            %
746 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

```

747                                     %
748 FUNCTION {format.school} {         % String Emtry::format_school(String
749   "school" format.bibinfo          %   return format_bibinfo(school, "sc
750 }                                   % }
751                                     %
752 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
753                                     %
754 FUNCTION {format.year} {           % String Emtry::format_year(String ye
755   "year" format.bibinfo            %   return format_bibinfo(year, "year
756 }                                   % }
757                                     %
758 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
759                                     %
760 FUNCTION {format.date} {           % String Emtry::format_date(String da
761   "date" format.bibinfo            %   return format_bibinfo(date, "date
762 }                                   % }
763                                     %
764 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
765                                     %
766 FUNCTION {format.journal} {        % String Emtry::format_journal(String
767   "journal" format.bibinfo         %   return format_bibinfo(journal, "j
768 }                                   % }
769                                     %
770 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
771                                     %
772 FUNCTION {format.volume} {         % String Emtry::format_volume(String
773   "volume" format.bibinfo          %   return format_bibinfo(volume, "vo
774 }                                   % }
775                                     %
776 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
777                                     %
778 FUNCTION {format.number} {         % String Emtry::format_number(String
779   add.bracket                      %   number = add_bracket(number);
780   "number" format.bibinfo          %   return format_bibinfo(number, "nu
781 }                                   % }
782                                     %
783 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
784                                     %
785 FUNCTION {format.report.number} {   % String Emtry::format_report_number
786   "number" format.bibinfo          %   return format_bibinfo(number, "nu
787 }                                   % }
788                                     %
789 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
790                                     %
791 FUNCTION {format.version} {        % String Emtry::format_version(String
792   "version" format.bibinfo         %   return format_bibinfo(version, "v
793 }                                   % }
794                                     %
795 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
796                                     %

```

```

797 FUNCTION {format.pages} {                                % String Emtry::format_pages(String p
798   "pages" format.bibinfo                                  %   return format_bibinfo(pages, "pa
799 }                                                         % }
800                                                         %
801 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
802                                                         %
803 FUNCTION {format.modifydate} {                            % String Emtry::format_modifydate(Str
804   add.bracket                                              %   modifydate = add_bracket(modifyda
805   "modifydate" format.bibinfo                              %   return format_bibinfo(modifydate,
806 }                                                         % }
807                                                         %
808 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
809                                                         %
810 FUNCTION {format.citedate} {                              % String Emtry::format_citedate(Strin
811   add.squarebracket                                       %   citedate = add_squarebracket(cite
812   "citedate" format.bibinfo                              %   return format_bibinfo(citedate, '
813 }                                                         % }
814                                                         %
815 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
816                                                         %
817                                                         % // NOTE: do not use the format_bibi
818                                                         % // since if the URL contains specia
819                                                         % // as '%', the \biburl{} will be br
820 FUNCTION {format.url} {                                    % String Emtry::format_url(String url
821   "\url{" swap$ * "}" *                                    %   return "\url{" + url + "}";
822 }                                                         % }
823                                                         %
824 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
825                                                         %
826 FUNCTION {get.full.title} {                                % String Entry::get_full_title() {
827   series empty$ {                                          %   if (empty(this.series)) {
828     volume empty$ {                                        %     if (empty(this.volume)) {
829       title                                              %       return this.title;
830     } {                                                  %     } else {
831       title cap.colon * cap.volume * volume *          %       return this.title + cap_colo
832     } if$                                                %     }
833   } {                                                  %   } else {
834     volume empty$ {                                        %     if (empty(this.volume)) {
835       series cap.colon * title *                          %     return this.series + cap_colo
836     } {                                                  %     } else {
837       series cap.comma * cap.volume * volume *          %     String str = this.series +
838       cap.colon * title *                                %     return str + cap_colon + th
839     } if$                                                %   }
840   } if$                                                  %   }
841 }                                                         % }
842                                                         %
843 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
844                                                         %
845 FUNCTION {get.full.booktitle} {                            % String Entry::get_full_booktitle()
846   series empty$ {                                          %   if (empty(this.series)) {

```

```

847     volume empty$ {                                %         if (empty(this.volume)) {
848         booktitle                                   %         return this.booktitle;
849     } {                                              %         } else {
850         booktitle cap.colon * cap.volume * volume * %         return this.booktitle + cap
851     } if$                                           %         }
852 } {                                                 %     } else {
853     volume empty$ {                                %         if (empty(this.volume)) {
854         series cap.colon * booktitle *              %         return this.series + cap_co
855     } {                                              %         } else {
856         series cap.comma * cap.volume * volume *   %         String str = this.series +
857         cap.colon * booktitle *                    %         return str + cap_colon + th
858     } if$                                           %         }
859 } if$                                              %     }
860 }                                                  % }
861                                                    %
862 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
863                                                    %
864 FUNCTION {get.pages} {                             % String Entry::get_pages() {
865     pages contain.dash {                             %     if (contain_dash(this.pages)) {
866         pages extract.before.first.dash             %         String p1 = extract_before_firs
867         pages extract.after.last.dash               %         String p2 = extract_after_last
868         cap.dash swap$ * *                          %         return p1 + cap_dash + p2;
869     } {                                              %     } else {
870         pages                                       %         return this.pages;
871     } if$                                           %     }
872 }                                                  % }
873                                                    %
874 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
875                                                    %
876 FUNCTION {output.author.or.editor} {               % void Entry::output_author_or_editor
877     'required :=                                     %     this.required = required;
878     author empty$ not {                             %     if (! empty(this.author)) {
879         author format.author write$                 %         write(format_author(this.author
880         cap.period write$                           %         write(cap_period);
881     } {                                              %     } else {
882         editor empty$ not {                         %         if (! empty(this.editor)) {
883             editor format.editor write$             %         write(format_editor(this.edi
884             cap.period write$                       %         write(cap_period);
885         } {                                          %         } else {
886             required {                              %             if (required == 1) {
887                 "Require author/editor: " cite$ * warning$ %             warning("Require author/edi
888                 cap.anonymous format.author write$ %             write(format_author(cap_and
889                 cap.period write$                   %             write(cap_period);
890             } 'skip$ if$                            %         }
891         } if$                                       %     }
892     } if$                                           %     }
893 }                                                  % }
894                                                    %
895 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
896                                                    %

```

```

897 FUNCTION {output.author} {
898   'required :=
899   author empty$ not {
900     author format.author write$
901     cap.period write$
902   } {
903     required {
904       "Require author: " cite$ * warning$
905       cap.anonymous format.author write$
906       cap.period write$
907     } 'skip$ if$
908   } if$
909 }
910
911 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
912
913 FUNCTION {output.editor} {
914   'required :=
915   editor empty$ not {
916     editor format.editor write$
917     cap.period write$
918   } {
919     required {
920       "Require editor: " cite$ * warning$
921       cap.anonymous format.editor write$
922       cap.period write$
923     } 'skip$ if$
924   } if$
925 }
926
927 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
928
929 FUNCTION {output.title} {
930   'required :=
931   title empty$ not {
932     title format.title write$
933   } {
934     required {
935       "Require title: " cite$ * warning$
936     } 'skip$ if$
937   } if$
938 }
939
940 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
941
942 FUNCTION {output.series.volume.title} {
943   'required :=
944   title empty$ not {
945     get.full.title format.booktitle write$
946   } {

```

```

% void Entry::output_author(int required) {
%   this.required = required;
%   if (! empty(this.author)) {
%     write(format_author(this.author));
%     write(cap_period);
%   } else {
%     if (required == 1) {
%       warning("Require author: " +
%       write(format_author(cap_anonymous));
%       write(cap_period);
%     }
%   }
% }
%
%
% void Entry::output_editor(int required) {
%   this.required = required;
%   if (! empty(this.editor)) {
%     write(format_editor(this.editor));
%     write(cap_period);
%   } else {
%     if (required == 1) {
%       warning("Require editor: " +
%       write(format_editor(cap_anonymous));
%       write(cap_period);
%     }
%   }
% }
%
%
% void Entry::output_title(int required) {
%   this.required = required;
%   if (! empty(this.title)) {
%     write(format_title(this.title));
%   } else {
%     if (required == 1) {
%       warning("Require title: " + t
%     }
%   }
% }
%
%
% void Entry::output_series_volume_title(int required) {
%   this.required = required;
%   if (! empty(this.title)) {
%     write(format_booktitle(get_full_title));
%   } else {

```



```

947     required {                                %     if (required == 1) {
948         "Require title: " cite$ * warning$      %         warning("Require title: " + t
949     } 'skip$ if$                                %     }
950 } if$                                           % }
951 }                                               % }
952                                               %
953 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
954                                               %
955 FUNCTION {output.series.volume.booktitle} {    % void Entry::output_series_volume_bo
956     'required :=                                %     this.required = required;
957     booktitle empty$ not {                      %     if (! empty(this.booktitle)) {
958         get.full.booktitle format.booktitle write$ %         write(format_booktitle(get_full
959     } {                                          %     } else {
960         required {                              %         if (required == 1) {
961             "Require booktitle: " cite$ * warning$ %             warning("Require booktitle: "
962         } 'skip$ if$                            %         }
963     } if$                                       %     }
964 }                                               % }
965                                               %
966 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
967                                               %
968 FUNCTION {output.journal} {                    % void Entry::output_journal(int requ
969     'required :=                                %     this.required = required;
970     journal empty$ not {                      %     if (! empty(this.journal)) {
971         cap.period write$                      %         write(cap_period);
972         journal format.journal write$          %         write(format_journal(this.journ
973     } {                                          %     } else {
974         required {                              %         if (required == 1) {
975             "Require journal: " cite$ * warning$ %             warning("Require journal: " +
976         } 'skip$ if$                            %         }
977     } if$                                       %     }
978 }                                               % }
979                                               %
980 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
981                                               %
982 FUNCTION {output.mark} {                      % void Entry::output_mark(int require
983     'required :=                                %     this.required = required;
984     mark empty$ not {                          %     if (! empty(this.mark)) {
985         mark format.mark write$                %         write(format_mark(this.mark));
986     } {                                          %     } else {
987         required {                              %         if (required == 1) {
988             "Require mark: " cite$ * warning$    %             warning("Require mark: " + th
989         } 'skip$ if$                            %         }
990     } if$                                       %     }
991 }                                               % }
992                                               %
993 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
994                                               %
995 FUNCTION {output.translator} {                % void Entry::output_translator(int r
996     'required :=                                %     this.required = required;

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997 translator empty$ not { % if (! empty(this.translator)) {
998     cap.period write$ % write(cap_period);
999     translator format.translator write$ % write(format_translator(this.tr
1000 } { % } else {
1001     required { % if (required == 1) {
1002         "Require translator: " cite$ * warning$ % warning("Require translator:
1003     } 'skip$ if$ % }
1004 } if$ % }
1005 % }
1006 %
1007 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1008 %
1009 FUNCTION {output.edition} { % void Entry::output_edition(int requ
1010     'required := % this.required = required;
1011     edition empty$ not { % if (! empty(this.edition)) {
1012         cap.period write$ % write(cap_period);
1013         edition format.edition write$ % write(format_edition(this.editi
1014     } { % } else {
1015         required { % if (required == 1) {
1016             "Require edition: " cite$ * warning$ % warning("Require edition: " +
1017         } 'skip$ if$ % }
1018     } if$ % }
1019 % }
1020 %
1021 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1022 %
1023 FUNCTION {output.address} { % void Entry::output_address(int requ
1024     'required := % this.required = required;
1025     address empty$ not { % if (! empty(this.address)) {
1026         cap.period write$ % write(cap_period);
1027         address format.address write$ % write(format_address(this.addre
1028     } { % } else {
1029         required { % if (required == 1) {
1030             "Require address: " cite$ * warning$ % warning("Require address: " +
1031             cap.period write$ % write(cap_period);
1032             cap.no.address format.address write$ % write(format_address(cap_no_a
1033         } 'skip$ if$ % }
1034     } if$ % }
1035 % }
1036 %
1037 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1038 %
1039 FUNCTION {output.publisher} { % void Entry::output_publisher(int re
1040     'required := % this.required = required;
1041     publisher empty$ not { % if (! empty(this.publisher)) {
1042         cap.colon write$ % write(cap_colon);
1043         publisher format.publisher write$ % write(format_publisher(this.puk
1044     } { % } else {
1045         required { % if (required == 1) {
1046             "Require publisher: " cite$ * warning$ % warning("Require publisher: "

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1047         cap.colon write$ % write(cap_colon);
1048         cap.no.publisher format.publisher write$ % write(format_publisher(cap_no
1049     } 'skip$ if$ % }
1050 } if$ % }
1051 } % }
1052 %
1053 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1054 %
1055 FUNCTION {output.publisher.no.address} { % void Entry::output_publisher_no_ad
1056     'required := % this.required = required;
1057     publisher empty$ not { % if (! empty(this.publisher)) {
1058         cap.period write$ % write(cap_period);
1059         publisher format.publisher write$ % write(format_publisher(this.pu
1060     } { % } else {
1061         required { % if (required == 1) {
1062             "Require publisher: " cite$ * warning$ % warning("Require publisher: "
1063             cap.period write$ % write(cap_period);
1064             cap.no.publisher format.publisher write$ % write(format_publisher(cap_no
1065         } 'skip$ if$ % }
1066     } if$ % }
1067 } % }
1068 %
1069 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1070 %
1071 FUNCTION {output.school} { % void Entry::output_school(int requi
1072     'required := % this.required = required;
1073     school empty$ not { % if (! empty(this.school)) {
1074         cap.colon write$ % write(cap_colon);
1075         school format.school write$ % write(format_school(this.school
1076     } { % } else {
1077         required { % if (required == 1) {
1078             "Require school: " cite$ * warning$ % warning("Require publisher: "
1079             cap.colon write$ % write(cap_colon);
1080             cap.no.publisher format.school write$ % write(format_school(cap_no_pu
1081         } 'skip$ if$ % }
1082     } if$ % }
1083 } % }
1084 %
1085 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1086 %
1087 FUNCTION {output.institution} { % void Entry::output_institution(int
1088     'required := % this.required = required;
1089     institution empty$ not { % if (! empty(this.institution)) {
1090         cap.colon write$ % write(cap_colon);
1091         institution format.institution write$ % write(format_publisher(this.ins
1092     } { % } else {
1093         required { % if (required == 1) {
1094             "Require institution: " cite$ * warning$ % warning("Require institution:
1095             cap.colon write$ % write(cap_colon);
1096             cap.no.publisher format.institution write$ % write(format_institution(cap_

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1097     } 'skip$ if$                                %    }
1098 } if$                                           %    }
1099 }                                              %    }
1100                                              %
1101 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1102                                              %
1103 FUNCTION {output.year} {                        % void Entry::output_year(int require
1104   'required :=                                %   this.required = required;
1105   year empty$ not {                            %   if (! empty(this.year)) {
1106     year format.year write$                    %     write(format_year(this.year));
1107   } {                                           %   } else {
1108     required {                                  %     if (required == 1) {
1109       "Require year: " cite$ * warning$        %       warning("Require year: " + th
1110     } 'skip$ if$                                %     }
1111   } if$                                           %   }
1112 }                                              % }
1113                                              %
1114 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1115                                              %
1116 FUNCTION {output.pages} {                      % void Entry::output_pages(int requir
1117   'required :=                                %   this.required = required;
1118   pages empty$ not {                           %   if (! empty(this.pages)) {
1119     cap.colon write$                            %     write(cap_colon);
1120     get.pages format.pages write$              %     write(format_pages(get_pages())
1121   } {                                           %   } else {
1122     required {                                  %     if (required == 1) {
1123       "Require pages: " cite$ * warning$        %       warning("Require pages: " + t
1124     } 'skip$ if$                                %     }
1125   } if$                                           %   }
1126 }                                              % }
1127                                              %
1128 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1129                                              %
1130 FUNCTION {output.modifydate} {                 % void Entry::output_modifydate(int r
1131   'required :=                                %   this.required = required;
1132   modifydate empty$ not {                      %   if (! empty(this.modifydate)) {
1133     cap.space write$                            %     write(cap_space);
1134     modifydate format.modifydate write$        %     write(format_modifydate(this.mo
1135   } {                                           %   } else {
1136     required {                                  %     if (required == 1) {
1137       "Require modifydate: " cite$ * warning$   %       warning("Require modifydate:
1138     } 'skip$ if$                                %     }
1139   } if$                                           %   }
1140 }                                              % }
1141                                              %
1142 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1143                                              %
1144 FUNCTION {output.citedate} {                   % void Entry::output_citedate(int re
1145   'required :=                                %   this.required = required;
1146   citedate empty$ not {                        %   if (! empty(this.citedate)) {

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1147     cap.space write$                                %     write(cap_space);
1148     citedate format.citedate write$                 %     write(format_citedate(this.cite
1149 } {                                                  % } else {
1150     required is.online or {                          %     if ((required == 1) || (is_onli
1151     "Require citedate: " cite$ * warning$            %         warning("Require citedate: "
1152 } 'skip$ if$                                         %     }
1153 } if$                                                % }
1154 }                                                    % }
1155                                                     %
1156 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1157                                                     %
1158 FUNCTION {output.date} {                             % void Entry::output_date(int require
1159     'required :=                                     %     this.required = required;
1160     date empty$ not {                                %     if (! empty(this.date)) {
1161         date format.date write$                     %         write(format_date(this.date));
1162     } {                                              %     } else {
1163         required {                                   %         if (required == 1) {
1164             "Require date: " cite$ * warning$        %             warning("Require date: " + th
1165         } 'skip$ if$                                 %         }
1166     } if$                                            %     }
1167 }                                                    % }
1168                                                     %
1169 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1170                                                     %
1171 FUNCTION {output.volume} {                           % void Entry::output_volume(int requi
1172     'required :=                                     %     this.required = required;
1173     volume empty$ not {                             %     if (! empty(this.volume)) {
1174         cap.comma write$                             %         write(cap_comma);
1175         volume format.volume write$                 %         write(format_volume(this.volum
1176     } {                                              %     } else {
1177         required {                                   %         if (required == 1) {
1178             "Require volume: " cite$ * warning$      %             warning("Require volume: " +
1179         } 'skip$ if$                                 %         }
1180     } if$                                            %     }
1181 }                                                    % }
1182                                                     %
1183 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1184                                                     %
1185 FUNCTION {output.number} {                           % void Entry::output_number(int requi
1186     'required :=                                     %     this.required = required;
1187     number empty$ not {                             %     if (! empty(this.number)) {
1188         number format.number write$                 %         write(format_number(this.number
1189     } {                                              %     } else {
1190         required {                                   %         if (required == 1) {
1191             "Require number: " cite$ * warning$      %             warning("Require number: " +
1192         } 'skip$ if$                                 %         }
1193     } if$                                            %     }
1194 }                                                    % }
1195                                                     %
1196 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

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1197                                     %
1198 FUNCTION {output.report.number} {    % void Entry::output_report_number(in
1199   'required :=                      %   this.required = required;
1200   number empty$ not {               %   if (! empty(this.number)) {
1201     cap.colon write$                %     write(cap_colon);
1202     number format.report.number write$ %     write(format_report_number(this
1203   } {                                %   } else {
1204     required {                      %     if (required == 1) {
1205       "Require number: " cite$ * warning$ %       warning("Require number: " +
1206     } 'skip$ if$                    %     }
1207   } if$                             %   }
1208 }                                   % }
1209                                     %
1210 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1211                                     %
1212 FUNCTION {output.country} {         % void Entry::output_country(int requ
1213   'required :=                      %   this.required = required;
1214   country empty$ not {              %   if (! empty(this.country)) {
1215     cap.colon write$                %     write(cap_colon);
1216     country format.country write$   %     write(format_country(this.countr
1217   } {                                %   } else {
1218     required {                      %     if (required == 1) {
1219       "Require country: " cite$ * warning$ %       warning("Require country: " +
1220     } 'skip$ if$                    %     }
1221   } if$                             %   }
1222 }                                   % }
1223                                     %
1224 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1225                                     %
1226 FUNCTION {output.patentid} {        % void Entry::output_patentid(int re
1227   'required :=                      %   this.required = required;
1228   patentid empty$ not {             %   if (! empty(this.patentid)) {
1229     cap.comma write$                %     write(cap_comma);
1230     patentid format.patentid write$ %     write(format_patentid(this.pate
1231   } {                                %   } else {
1232     required {                      %     if (required == 1) {
1233       "Require patentid: " cite$ * warning$ %       warning("Require patentid: "
1234     } 'skip$ if$                    %     }
1235   } if$                             %   }
1236 }                                   % }
1237                                     %
1238 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1239                                     %
1240 FUNCTION {output.start.year} {      % void Entry::output_start_year(int r
1241   'required :=                      %   this.required = required;
1242   year empty$ not {                 %   if (! empty(this.year)) {
1243     year extract.before.first.dash %     String str = extract_before_fir
1244     format.year write$              %     write(format_year(str));
1245   } {                                %   } else {
1246     required {                      %     if (required == 1) {

```

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1247     "Require year: " cite$ * warning$           %       warning("Require year: " + th
1248   } 'skip$ if$                                   %       }
1249 } if$                                             %       }
1250 }                                                 %       }
1251                                                 %
1252 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1253                                                 %
1254 FUNCTION {output.start.volume} {                 % void Entry::output_start_volume(int
1255   'required :=                                     %   this.required = required;
1256   volume empty$ not {                             %   if (! empty(this.volume)) {
1257     cap.comma write$                               %     write(cap_comma);
1258     volume extract.before.first.dash              %     String str = extract_before_fir
1259     format.volume write$                           %     write(format_volume(str));
1260   } {                                              %   } else {
1261     required {                                     %     if (required == 1) {
1262       "Require volume: " cite$ * warning$         %       warning("Require volume: " +
1263     } 'skip$ if$                                   %     }
1264   } if$                                           %   }
1265 }                                                 % }
1266                                                 %
1267 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1268                                                 %
1269 FUNCTION {output.start.number} {                 % void Entry::output_start_number(int
1270   'required :=                                     %   this.required = required;
1271   number empty$ not {                             %   if (! empty(this.number)) {
1272     number extract.before.first.dash              %     String str = extract_before_fir
1273     format.number write$                           %     write(format_number(str));
1274   } {                                              %   } else {
1275     required {                                     %     if (required == 1) {
1276       "Require number: " cite$ * warning$         %       warning("Require number: " +
1277     } 'skip$ if$                                   %     }
1278   } if$                                           %   }
1279 }                                                 % }
1280                                                 %
1281 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1282                                                 %
1283 FUNCTION {output.end.year} {                     % void Entry::output_end_year(int rec
1284   'required :=                                     %   this.required = required;
1285   year empty$ not {                               %   if (! empty(this.year)) {
1286     year extract.after.last.dash                  %     String str = extract_after_last
1287     format.year write$                             %     write(format_year(str));
1288   } {                                              %   } else {
1289     required {                                     %     if (required == 1) {
1290       "Require year: " cite$ * warning$           %       warning("Require year: " + th
1291     } 'skip$ if$                                   %     }
1292   } if$                                           %   }
1293 }                                                 % }
1294                                                 %
1295 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1296                                                 %

```

```

1297 FUNCTION {output.end.volume} { % void Entry::output_end_volume(int r
1298   'required := % this.required = required;
1299   volume empty$ not { % if (! empty(this.volume)) {
1300     cap.comma write$ % write(cap_comma);
1301     volume extract.after.last.dash % String str = extract_after_last
1302     format.volume write$ % write(format_volume(str));
1303   } { % } else {
1304     required { % if (required == 1) {
1305       "Require volume: " cite$ * warning$ % warning("Require volume: " +
1306     } 'skip$ if$ % }
1307   } if$ % }
1308 } % }
1309 %
1310 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1311 %
1312 FUNCTION {output.end.number} { % void Entry::output_end_number(int r
1313   'required := % this.required = required;
1314   number empty$ not { % if (! empty(this.number)) {
1315     number extract.after.last.dash % String str = extract_after_last
1316     format.number write$ % write(format_number(str));
1317   } { % } else {
1318     required { % if (required == 1) {
1319       "Require number: " cite$ * warning$ % warning("Require number: " +
1320     } 'skip$ if$ % }
1321   } if$ % }
1322 } % }
1323 %
1324 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1325 %
1326 FUNCTION {output.url.or.doi} { % void Entry::output_url_or_doi(int r
1327   'required := % this.required = required;
1328   url empty$ not { % if (! empty(this.url)) {
1329     cap.period write$ % write(cap_period);
1330     url format.url write$ % write(format_url(this.url));
1331   } { % } else {
1332     doi empty$ not { % if (! empty(this.doi)) {
1333       cap.period write$ % write(cap_period);
1334       cap.doi.url doi * format.url write$ % write(format_url(cap_doi_url
1335     } { % } else {
1336       required { % if (required == 1) {
1337         "Require URL or DOI: " cite$ * warning$ % warning("Require URL or DOI
1338       } 'skip$ if$ % }
1339     } if$ % }
1340   } if$ % }
1341 } % }
1342 %
1343 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1344 %
1345 FUNCTION {output.url} { % void Entry::output_url(int required
1346   'required := % this.required = required;

```



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1347 url empty$ not { % if (! empty(this.url)) {
1348     cap.period write$ % write(cap_period);
1349     url format.url write$ % write(format_url(this.url));
1350 } { % } else {
1351     required { % if (required == 1) {
1352         "Require URL: " cite$ * warning$ % warning("Require URL: " + th
1353     } 'skip$ if$ % }
1354 } if$ % }
1355 } % }
1356 %
1357 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1358 %
1359 FUNCTION {output.version} { % void Entry::output_version(int requ
1360     'required := % this.required = required;
1361     version empty$ not { % if (! empty(this.version)) {
1362         cap.period write$ % write(cap_period);
1363         version format.version write$ % write(format_version(this versi
1364     } { % } else {
1365         required { % if (required == 1) {
1366             "Require version: " cite$ * warning$ % warning("Require version: " +
1367         } 'skip$ if$ % }
1368     } if$ % }
1369 } % }
1370 %
1371 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1372 %
1373 FUNCTION {book.impl} { % void Entry::book_impl() {
1374     start.bibitem % start_bibitem();
1375     true output.author.or.editor % output_author_or_editor(true);
1376     true output.series.volume.title % output_series_volume_title(true);
1377     true output.mark % output_mark(true);
1378     false output.translator % output_translator(false);
1379     false output.edition % output_edition(false);
1380     publisher empty$ not { % if (! empty(this.publisher)) {
1381         true output.address % output_address(true);
1382         true output.publisher % output_publisher(true);
1383         cap.comma write$ % write(cap_comma);
1384     } { % } else {
1385         cap.period write$ % write(cap_period);
1386     } if$ % }
1387     true output.year % output_year(true);
1388     false output.pages % output_pages(false);
1389     false output.citedate % output_citedate(false);
1390     false output.url.or.doi % output_url_or_doi(false);
1391     end.bibitem % end_bibitem();
1392 } % }
1393 %
1394 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1395 %
1396 FUNCTION {book} { % void Entry::book() {

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1397 "M" set.mark % set_mark("M");
1398 book.impl % book_impl();
1399 } % }
1400 %
1401 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1402 %
1403 FUNCTION {collection} { % void Entry::collection() {
1404 "G" set.mark % set_mark("G");
1405 book.impl % book_impl();
1406 } % }
1407 %
1408 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1409 %
1410 FUNCTION {proceedings} { % void Entry::proceedings() {
1411 "C" set.mark % set_mark("C");
1412 start.bibitem % start_bibitem();
1413 true output.editor % output_editor(true);
1414 true output.series.volume.title % output_series_volume_title(true);
1415 true output.mark % output_mark(true);
1416 false output.translator % output_translator(false);
1417 false output.edition % output_edition(false);
1418 publisher empty$ not { % if (! empty(this.publisher)) {
1419 true output.address % output_address(true);
1420 true output.publisher % output_publisher(true);
1421 cap.comma write$ % write(cap_comma);
1422 } { % } else {
1423 cap.period write$ % write(cap_period);
1424 } if$ % }
1425 true output.year % output_year(true);
1426 false output.pages % output_pages(false);
1427 false output.citedate % output_citedate(false);
1428 false output.url.or.doi % output_url_or_doi(false);
1429 end.bibitem % end_bibitem();
1430 } % }
1431 %
1432 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1433 %
1434 FUNCTION {conference} { % void Entry::conference() {
1435 proceedings % proceedings();
1436 } % }
1437 %
1438 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1439 %
1440 FUNCTION {thesis.impl} { % void Entry::thesis_impl() {
1441 start.bibitem % start_bibitem();
1442 true output.author % output_author(true);
1443 true output.title % output_title(true);
1444 true output.mark % output_mark(true);
1445 false output.translator % output_translator(false);
1446 true output.address % output_address(true);

```

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1447 true output.school % output_school(true);
1448 cap.comma write$ % write(cap_comma);
1449 true output.year % output_year(true);
1450 false output.pages % output_pages(false);
1451 false output.citedate % output_citedate(false);
1452 false output.url.or.doi % output_url_or_doi(false);
1453 end.bibitem % end_bibitem();
1454 } % }
1455 %
1456 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1457 %
1458 FUNCTION {phdthesis} { % void Entry::phdthesis() {
1459 "D" set.mark % set_mark("D");
1460 thesis.impl % thesis_impl();
1461 } % }
1462 %
1463 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1464 %
1465 FUNCTION {masterthesis} { % void Entry::masterthesis() {
1466 "D" set.mark % set_mark("D");
1467 thesis.impl % thesis_impl();
1468 } % }
1469 %
1470 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1471 %
1472 FUNCTION {mastersthesis} { % void Entry::mastersthesis() {
1473 "D" set.mark % set_mark("D");
1474 thesis.impl % thesis_impl();
1475 } % }
1476 %
1477 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1478 %
1479 FUNCTION {bachelorthesis} { % void Entry::bachelorthesis() {
1480 "D" set.mark % set_mark("D");
1481 thesis.impl % thesis_impl();
1482 } % }
1483 %
1484 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1485 %
1486 FUNCTION {techreport} { % void Entry::techreport() {
1487 "R" set.mark % set_mark("R");
1488 start.bibitem % start_bibitem();
1489 true output.author % output_author(true);
1490 true output.title % output_title(true);
1491 false output.report.number % output_report_number(false);
1492 true output.mark % output_mark(true);
1493 false output.translator % output_translator(false);
1494 false output.edition % output_edition(false);
1495 false output.version % output_version(false);
1496 institution empty$ not { % if (! empty(this.institution)) {

```

```

1497     true output.address           %     output_address(true);
1498     true output.institution        %     output_institution(true);
1499     cap.comma write$               %     write(cap_comma);
1500 } {                               % } else {
1501     cap.period write$              %     write(cap_period);
1502 } if$                             % }
1503 true output.year                  %     output_year(true);
1504 false output.pages                %     output_pages(false);
1505 false output.citedate              %     output_citedate(false);
1506 false output.url.or.doi           %     output_url_or_doi(false);
1507 end.bibitem                       %     end_bibitem();
1508 }                                 % }
1509                                  %
1510 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1511                                  %
1512 FUNCTION {standard} {             % void Entry::standard() {
1513     "S" set.mark                   %     set_mark("S");
1514     start.bibitem                  %     start_bibitem();
1515     true output.author             %     output_author(true);
1516     true output.title              %     output_title(true);
1517     true output.mark               %     output_mark(true);
1518     false output.translator        %     output_translator(false);
1519     false output.edition           %     output_edition(false);
1520     publisher empty$ not {         %     if (! empty(this.publisher)) {
1521         true output.address         %         output_address(true);
1522         true output.publisher       %         output_publisher(true);
1523         cap.comma write$           %         write(cap_comma);
1524     } {                             %     } else {
1525         cap.period write$          %         write(cap_period);
1526     } if$                          %     }
1527 true output.year                  %     output_year(true);
1528 false output.pages                %     output_pages(false);
1529 false output.citedate              %     output_citedate(false);
1530 false output.url.or.doi           %     output_url_or_doi(false);
1531 end.bibitem                       %     end_bibitem();
1532 }                                 % }
1533                                  %
1534 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1535                                  %
1536 FUNCTION {reference} {            % void Entry::reference() {
1537     "K" set.mark                   %     set_mark("K");
1538     start.bibitem                  %     start_bibitem();
1539     false output.author.or.editor  %     output_author_or_editor(false);
1540     true output.series.volume.title %     output_series_volume_title(true);
1541     true output.mark               %     output_mark(true);
1542     false output.translator        %     output_translator(false);
1543     false output.edition           %     output_edition(false);
1544     publisher empty$ not {         %     if (! empty(this.publisher)) {
1545         true output.address         %         output_address(true);
1546         true output.publisher       %         output_publisher(true);

```

```

1547     cap.comma write$                                %     write(cap_comma);
1548 } {                                                  % } else {
1549     cap.period write$                                %     write(cap_period);
1550 } if$                                                % }
1551 true output.year                                    %     output_year(true);
1552 false output.pages                                  %     output_pages(false);
1553 false output.citedate                               %     output_citedate(false);
1554 false output.url.or.doi                             %     output_url_or_doi(false);
1555 end.bibitem                                          %     end_bibitem();
1556 }                                                    % }
1557 %                                                    %
1558 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1559 %                                                    %
1560 FUNCTION {manual} {                                  % void Entry::manual() {
1561     reference                                          %     reference();
1562 }                                                    % }
1563 %                                                    %
1564 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1565 %                                                    %
1566 FUNCTION {periodical.impl} {                         % void Entry::periodical_impl() {
1567     start.bibitem                                      %     start_bibitem();
1568     false output.editor                              %     output_editor(false);
1569     true output.title                                 %     output_title(true);
1570     true output.mark                                  %     output_mark(true);
1571     cap.period write$                                %     write(cap_period);
1572     true output.start.year                            %     output_start_year(true);
1573     false output.start.volume                        %     output_start_volume(false);
1574     false output.start.number                        %     output_start_number(false);
1575     cap.dash write$                                  %     write(cap_dash);
1576     year contain.dash {                              %     if (contain_dash(this.year)) {
1577         true output.end.year                          %         output_end_year(true);
1578         false output.end.volume                       %         output_end_volume(false);
1579         false output.end.number                       %         output_end_number(false);
1580     } 'skip$ if$                                     %     }
1581     publisher empty$ not {                            %     if (! empty(this.publisher)) {
1582         true output.address                            %         output_address(true);
1583         true output.publisher                         %         output_publisher(true);
1584         cap.comma write$                              %         write(cap_comma);
1585     } {                                               %     } else {
1586         cap.period write$                              %         write(cap_period);
1587     } if$                                             %     }
1588     true output.start.year                            %     output_start_year(true);
1589     cap.dash write$                                  %     write(cap_dash);
1590     year contain.dash {                              %     if (contain_dash(this.year)) {
1591         true output.end.year                          %         output_end_year(true);
1592     } 'skip$ if$                                     %     }
1593     false output.citedate                             %     output_citedate(false);
1594     false output.url.or.doi                           %     output_url_or_doi(false);
1595     end.bibitem                                          %     end_bibitem();
1596 }                                                    % }

```

```

1597                                     %
1598 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1599                                     %
1600 FUNCTION {periodical} {               % void Entry::periodical() {
1601   "J" set.mark                        %   set_mark("J");
1602   periodical.impl                     %   periodical_impl();
1603 }                                     % }
1604                                     %
1605 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1606                                     %
1607 FUNCTION {newspaper} {                % void Entry::newspaper() {
1608   "N" set.mark                        %   set_mark("N");
1609   periodical.impl                     %   periodical_impl();
1610 }                                     % }
1611                                     %
1612 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1613                                     %
1614 FUNCTION {patent} {                  % void Entry::patent() {
1615   "P" set.mark                        %   set_mark("P");
1616   start.bibitem                       %   start_bibitem();
1617   true output.author                  %   output_author(true);
1618   true output.title                   %   output_title(true);
1619   true output.country                 %   output_country(true);
1620   true output.patentid                %   output_patentid(true);
1621   true output.mark                    %   output_mark(true);
1622   cap.period write$                   %   write(cap_period);
1623   true output.date                    %   output_date(true);
1624   false output.citedate               %   output_citedate(false);
1625   false output.url.or.doi            %   output_url_or_doi(false);
1626   end.bibitem                        %   end_bibitem();
1627 }                                     % }
1628                                     %
1629 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1630                                     %
1631 FUNCTION {online} {                  % void Entry::online() {
1632   "EB" set.mark                       %   set_mark("EB");
1633   start.bibitem                       %   start_bibitem();
1634   false output.author                 %   output_author(false);
1635   true output.title                   %   output_title(true);
1636   true output.mark                    %   output_mark(true);
1637   publisher empty$ not {              %   if (! empty(this.publisher)) {
1638     address empty$ not {              %     if (! empty(this.address)) {
1639       true output.address              %       output_address(true);
1640       true output.publisher            %       output_publisher(true);
1641       cap.comma write$                 %       write(cap_comma);
1642     } {                                %     } else {
1643       true output.publisher.no.address %       output_publisher_no_address(t
1644       cap.comma write$                 %       write(cap_comma);
1645     } if$                              %     }
1646   } {                                  %   } else {

```

```

1647     cap.period write$                                %     write(cap_period);
1648 } if$                                                %     }
1649 true output.year                                    %     output_year(true);
1650 false output.modifydate                            %     output_modifydate(false);
1651 true output.citedate                               %     output_citedate(true);
1652 true output.url                                    %     output_url(true);
1653 end.bibitem                                         %     end_bibitem();
1654 }                                                    % }
1655                                                     %
1656 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1657                                                     %
1658 FUNCTION {webpage} {                                % void Entry::online() {
1659     online                                           %     online();
1660 }                                                    % }
1661                                                     %
1662 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1663                                                     %
1664 FUNCTION {program.impl} {                            % void Entry::program_impl() {
1665     start.bibitem                                    %     start_bibitem();
1666     false output.author                            %     output_author(false);
1667     true output.title                               %     output_title(true);
1668     true output.mark                               %     output_mark(true);
1669     publisher empty$ not {                          %     if (! empty(this.publisher)) {
1670         true output.address                        %         output_address(true);
1671         true output.publisher                      %         output_publisher(true);
1672         cap.comma write$                          %         write(cap_comma);
1673     } {                                              %     } else {
1674         cap.period write$                          %         write(cap_period);
1675     } if$                                           %     }
1676     true output.year                                %     output_year(true);
1677     false output.citedate                          %     output_citedate(false);
1678     false output.url.or.doi                       %     output_url_or_doi(false);
1679     end.bibitem                                     %     end_bibitem();
1680 }                                                    % }
1681                                                     %
1682 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1683                                                     %
1684 FUNCTION {program} {                                % void Entry::program() {
1685     "CP" set.mark                                    %     set_mark("CP");
1686     program.impl                                    %     program_impl();
1687 }                                                    % }
1688                                                     %
1689 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1690                                                     %
1691 FUNCTION {database} {                                % void Entry::database() {
1692     "DB" set.mark                                    %     set_mark("DB");
1693     program.impl                                    %     program_impl();
1694 }                                                    % }
1695                                                     %
1696 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

```

1697                                     %
1698 FUNCTION {unpublished} {           % void Entry::unpublished() {
1699   "H" set.mark                       %   set_mark("H");
1700   start.bibitem                     %   start_bibitem();
1701   true output.author                %   output_author(true);
1702   true output.title                 %   output_title(true);
1703   true output.mark                  %   output_mark(true);
1704   cap.period write$                 %   write(cap_period);
1705   true output.year                  %   output_year(true);
1706   false output.citedate              %   output_citedate(false);
1707   false output.url.or.doi           %   output_url_or_doi(false);
1708   end.bibitem                       %   end_bibitem();
1709 }                                   % }
1710                                     %
1711 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1712                                     %
1713 FUNCTION {manuscript} {             % void Entry::manuscript() {
1714   unpublished                       %   unpublished();
1715 }                                   % }
1716                                     %
1717 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1718                                     %
1719 FUNCTION {inbook.impl} {            % void Entry::inbook_impl() {
1720   start.bibitem                     %   start_bibitem();
1721   true output.author                %   output_author(true);
1722   true output.title                 %   output_title(true);
1723   true output.mark                  %   output_mark(true);
1724   false output.translator            %   output_translator(false);
1725   cap.double.slash write$           %   write(cap_double_slash);
1726   false output.editor               %   output_editor(false);
1727   true output.series.volume.booktitle %   output_series_volume_booktitle(tr
1728   false output.edition               %   output_edition(false);
1729   publisher empty$ not {             %   if (! empty(this.publisher)) {
1730     true output.address              %     output_address(true);
1731     true output.publisher            %     output_publisher(true);
1732     cap.comma write$                 %     write(cap_comma);
1733   } {                                %   } else {
1734     cap.period write$                 %     write(cap_period);
1735   } if$                              %   }
1736   true output.year                  %   output_year(true);
1737   false output.pages                 %   output_pages(false);
1738   false output.citedate              %   output_citedate(false);
1739   false output.url.or.doi           %   output_url_or_doi(false);
1740   end.bibitem                       %   end_bibitem();
1741 }                                   % }
1742                                     %
1743 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1744                                     %
1745 FUNCTION {inbook} {                 % void Entry::inbook() {
1746   "M" set.mark                       %   set_mark("M");

```



```

1747 inbook.impl                                % inbook_impl();
1748 }                                             % }
1749                                             %
1750 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1751                                             %
1752 FUNCTION {incollection} {                     % void Entry::incollection() {
1753   "G" set.mark                               %   set_mark("G");
1754   inbook.impl                                %   inbook_impl();
1755 }                                             % }
1756                                             %
1757 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1758                                             %
1759 FUNCTION {inproceedings} {                   % void Entry::inproceedings() {
1760   "C" set.mark                               %   set_mark("C");
1761   inbook.impl                                %   inbook_impl();
1762 }                                             % }
1763                                             %
1764 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1765                                             %
1766 FUNCTION {article} {                         % void Entry::article() {
1767   "J" set.mark                               %   set_mark("J");
1768   start.bibitem                             %   start_bibitem();
1769   true output.author                        %   output_author(true);
1770   true output.title                         %   output_title(true);
1771   true output.mark                          %   output_mark(true);
1772   true output.journal                       %   output_journal(true);
1773   cap.comma write$                          %   write(cap_comma);
1774   true output.year                         %   output_year(true);
1775   false output.volume                      %   output_volume(false);
1776   false output.number                      %   output_number(false);
1777   false output.pages                       %   output_pages(false);
1778   false output.citedate                    %   output_citedate(false);
1779   false output.url.or.doi                  %   output_url_or_doi(false);
1780   end.bibitem                              %   end_bibitem();
1781 }                                             % }
1782                                             %
1783 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1784                                             %
1785 FUNCTION {news} {                            % void Entry::news() {
1786   "N" set.mark                               %   set_mark("N");
1787   start.bibitem                             %   start_bibitem();
1788   true output.author                        %   output_author(true);
1789   true output.title                         %   output_title(true);
1790   true output.mark                          %   output_mark(true);
1791   true output.journal                       %   output_journal(true);
1792   cap.comma write$                          %   write(cap_comma);
1793   true output.date                         %   output_date(true);
1794   false output.number                      %   output_number(false);
1795   false output.citedate                    %   output_citedate(false);
1796   false output.url.or.doi                  %   output_url_or_doi(false);

```

```

1797 end.bibitem % end_bibitem();
1798 } % }
1799 %
1800 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1801 %
1802 FUNCTION {default.type} { % void Entry::default_type() {
1803   "Unsupported entry type for " cite$ * warning$ % warning("Unsupported entry type f
1804 } % }
1805 %
1806 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1807 %
1808 FUNCTION {longest.label.pass} { % void longest_label_pass(Entry entry
1809   entry.count #1 + 'entry.count := % entry_count = entry_count + 1;
1810   entry.count int.to.str$ 'label := % this.label = int_to_str(entry_cou
1811   label width$ longest.label.width > { % if (width(this.label) > longest_l
1812     label 'longest.label := % longest_label = this.label;
1813     label width$ 'longest.label.width := % longest_label_width = width(thi
1814   } 'skip$ if$ % }
1815 } % }
1816 %
1817 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1818 %
1819 FUNCTION {write.style.commands} { % void write_style_commands() {
1820   cmd.bibauthor write$ % write(cmd_bibauthor);
1821   newline$ % writeln();
1822   cmd.bibeditor write$ % write(cmd_bibeditor);
1823   newline$ % writeln();
1824   cmd.bibtranslator write$ % write(cmd_bibtranslator);
1825   newline$ % writeln();
1826   cmd.bibtitle write$ % write(cmd_bibtitle);
1827   newline$ % writeln();
1828   cmd.bibbooktitle write$ % write(cmd_bibbooktitle);
1829   newline$ % writeln();
1830   cmd.bibjournal write$ % write(cmd_bibjournal);
1831   newline$ % writeln();
1832   cmd.bibmark write$ % write(cmd_bibmark);
1833   newline$ % writeln();
1834   cmd.bibcountry write$ % write(cmd_bibcountry);
1835   newline$ % writeln();
1836   cmd.bibpatentid write$ % write(cmd_bibpatentid);
1837   newline$ % writeln();
1838   cmd.bibedition write$ % write(cmd_bibedition);
1839   newline$ % writeln();
1840   cmd.biborganization write$ % write(cmd_biborganization);
1841   newline$ % writeln();
1842   cmd.bibaddress write$ % write(cmd_bibaddress);
1843   newline$ % writeln();
1844   cmd.bibpublisher write$ % write(cmd_bibpublisher);
1845   newline$ % writeln();
1846   cmd.bibinstitution write$ % write(cmd_bibinstitution);

```

```

1847  newline$                                %   writeln();
1848  cmd.bibschooll write$                     %   write(cmd_bibschooll);
1849  newline$                                %   writeln();
1850  cmd.bibvolume write$                     %   write(cmd_bibvolume);
1851  newline$                                %   writeln();
1852  cmd.bibnumber write$                     %   write(cmd_bibnumber);
1853  newline$                                %   writeln();
1854  cmd.bibversion write$                     %   write(cmd_bibversion);
1855  newline$                                %   writeln();
1856  cmd.bibpages write$                      %   write(cmd_bibpages);
1857  newline$                                %   writeln();
1858  cmd.bibmodifydate write$                 %   write(cmd_bibmodifydate);
1859  newline$                                %   writeln();
1860  cmd.bibcitedate write$                   %   write(cmd_bibcitedate);
1861  newline$                                %   writeln();
1862  cmd.bibyear write$                       %   write(cmd_bibyear);
1863  newline$                                %   writeln();
1864  cmd.bibdate write$                       %   write(cmd_bibdate);
1865  newline$                                %   writeln();
1866  cmd.biburl write$                        %   write(cmd_biburl);
1867  newline$                                %   writeln();
1868 }                                         % }
1869                                         %
1870 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1871                                         %
1872 FUNCTION {begin.bib} {                    % void begin_bib() {
1873   preamble$ empty$ not {                  %   if (! empty(preamble)) {
1874     preamble$ write$                      %     write(preamble);
1875     newline$                             %     writeln();
1876   } 'skip$ if$                            %   }
1877   env.bibbegin write$                     %   write(env_bibbegin);
1878   "{" longest.label * "}" * write$        %   write "{" + longest.label + "}";
1879   newline$                               %   writeln();
1880   write.style.commands                    %   write_style_commands();
1881 }                                         % }
1882                                         %
1883 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1884                                         %
1885 FUNCTION {end.bib} {                      % void end_bib() {
1886   newline$                               %   writeln();
1887   env.bibend write$                       %   write(env_bibend);
1888   newline$                               %   writeln();
1889 }                                         % }
1890                                         %
1891 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1892                                         %
1893 FUNCTION {initialize} {                   % void initialize() {
1894   #0 'entry.count :=                      %   entry_count = 0;
1895   #0 'longest.label.width :=              %   longest_label_width = 0;
1896   "" 'longest.label :=                    %   longest_label = "";

```

```

1897 } % }
1898 %
1899 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1900 %
1901 % void main() {
1902 READ % List<Entry> entryList = read("<f
1903 EXECUTE {initialize} % initialize();
1904 ITERATE {longest.label.pass} % for (Entry entry : entryList) {
1905 % longest_label_pass(entry);
1906 % }
1907 EXECUTE {begin.bib} % begin_bib();
1908 ITERATE {call.type$} % for (Entry entry : entryList) {
1909 % switch (typeof(entry)) {
1910 % case "book":
1911 % entry.book();
1912 % break;
1913 % case "article":
1914 % entry.article();
1915 % break;
1916 % .
1917 % .
1918 % .
1919 % case "incollection":
1920 % entry.incollection();
1921 % break;
1922 % case "misc":
1923 % entry.misc();
1924 % break;
1925 % default:
1926 % entry.default_type();
1927 % }
1928 % }
1929 EXECUTE {end.bib} % end_bib();
1930 % }
1931 %
1932 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1933 </bst>
1934 <bookcls | artcls>\NeedsTeXFormat{LaTeX2e}[1999/12/01]
1935 <bookcls>\ProvidesClass{heuthesisbook}
1936 <artcls>\ProvidesClass{heuthesisart}
1937 <bookcfg>\ProvidesFile{heuthesisbook.cfg}
1938 <artcfg>\ProvidesFile{heuthesisart.cfg}
1939 <heuthesis-style>\ProvidesPackage{heuthesis}
1940 <artcls | bookcls | bookcfg | artcfg | heuthesis-style>[2021/05/06 3.0.15 Harbin Engineering University T
1941 <*artcls>
1942 \RequirePackage{ifthen}
1943 \RequirePackage{kvoptions}
1944 \SetupKeyvalOptions{
1945 family=heu,
1946 prefix=heu@,

```

```
1947 setkeys=\kvsetkeys}
1948
1949 \newif\ifheu@bachelor
1950 \newif\ifheu@master
1951 \newif\ifheu@doctor
1952 \define@key{heu}{type}{%
1953   \heu@bachelorfalse
1954   \heu@masterfalse
1955   \heu@doctorfalse
1956   \expandafter\csname heu@#1true\endcsname}
1957
1958 \newif\ifheu@productdevelopment
1959 \newif\ifheu@projectdplanning
1960 \newif\ifheu@projectdesign
1961 \newif\ifheu@applicationresearch
1962 \define@key{heu}{researchtype}{%
1963   \heu@productdevelopmentfalse
1964   \heu@projectdplanningfalse
1965   \heu@projectdesignfalse
1966   \heu@applicationresearchfalse
1967   \expandafter\csname heu@#1true\endcsname}
1968 \ifheu@productdevelopment\relax\else
1969 \ifheu@projectdplanning\relax\else
1970 \ifheu@projectdesign\relax\else
1971 \heu@applicationresearchtrue
1972 \fi
1973 \fi
1974 \fi
1975
1976 \newif\ifheu@qingdao
1977 \newif\ifheu@yantai
1978 \newif\ifheu@harbin
1979 \define@key{heu}{campus}{%
1980   \heu@qingdaofalse
1981   \heu@yantaifalse
1982   \heu@harbinfalse
1983   \expandafter\csname heu@#1true\endcsname}
1984 \ifheu@yantai\relax\else
1985 \ifheu@qingdao\relax\else
1986 \heu@harbintrue
1987 \fi
1988 \fi
1989
1990 \newif\ifheu@opening
1991 \newif\ifheu@midterm
1992 \define@key{heu}{stage}{%
1993   \heu@openingfalse
1994   \heu@midtermfalse
1995   \expandafter\csname heu@#1true\endcsname}
1996
```

```

1997\DeclareBoolOption[true]{raggedbottom}
1998\DeclareBoolOption[false]{pifootnote}
1999\DeclareBoolOption[false]{debug}
2000\DeclareBoolOption[true]{toc}
2001\DeclareBoolOption[true]{newtxmath}
2002
2003\DeclareStringOption{fontset}
2004
2005\DeclareDefaultOption{\PassOptionsToClass{\CurrentOption}{ctexart}}
2006
2007\ProcessKeyvalOptions*
2008\PassOptionsToPackage{no-math}{fontspec}
2009
2010\ifheu@bachelor\relax\else
2011\ifheu@master\relax\else
2012\ifheu@doctor\relax\else
2013\ClassError{heuthesisart}%
2014 {
2015   \MessageBreak Please specify thesis type in option:
2016   \MessageBreak type=[bachelor | master | doctor]
2017 }
2018\fi
2019\fi
2020\fi
2021
2022\ifheu@productdevelopment\relax\else
2023\ifheu@projectdplanning\relax\else
2024\ifheu@projectdesign\relax\else
2025\ifheu@applicationresearch\relax\else
2026\ClassError{heuthesisartplus}%
2027 {
2028   \MessageBreak Please specify researchtype in option:
2029   \MessageBreak researchtype=[productdevelopment | projectdplanning | projectdesign | a
2030 }
2031\fi
2032\fi
2033\fi
2034\fi
2035
2036\ifheu@opening\relax\else
2037\ifheu@midterm\relax\else
2038\ClassError{heuthesisart}%
2039 {
2040   \MessageBreak Please specify stage in option:
2041   \MessageBreak stage=<opening|midterm>
2042 }
2043\fi
2044\fi
2045
2046\ifthenelse%

```

```

2047 {\equal{\heu@fontset}{}}%
2048 {%
2049   \PassOptionsToPackage{AutoFakeBold=2}{xeCJK}
2050 }%
2051 {%
2052   \ifthenelse%
2053     {\equal{\heu@fontset}{siyuan}}%
2054     {\relax}%
2055     {%
2056       \PassOptionsToPackage{AutoFakeBold=2}{xeCJK}
2057     }%
2058   \PassOptionsToClass{fontset=\heu@fontset}{ctexart}
2059 }%
2060 \LoadClass[a4paper,UTF8,zihao=-4,scheme=plain]{ctexart}
2061
2062 \RequirePackage{etoolbox}
2063 \RequirePackage{ifxetex}
2064 \ifxetex
2065 \else
2066   \ClassError{heuthesis}%
2067     {Please use: \MessageBreak
2068       xelatex}{}
2069 \fi
2070 \RequirePackage{xparse}
2071 \RequirePackage{amsmath}
2072 \RequirePackage[amsmath,thmmarks,hyperref]{ntheorem}
2073 \RequirePackage{amssymb}
2074 \ifheu@newtxmath
2075 \RequirePackage{newtxmath}
2076 \fi
2077 \RequirePackage{graphicx}
2078 \RequirePackage{pdfpages}
2079 \includepdfset{fitpaper=true}
2080 \RequirePackage{enumitem}           % 使用 enumitem 宏包, 改变列表项的格式
2081 \RequirePackage{environ}
2082 \RequirePackage{microtype}         % 微调字体间距
2083 \ifheu@raggedbottom
2084   \RequirePackage[bottom,perpage,hang]{footmisc}
2085   \raggedbottom
2086 \else
2087   \RequirePackage[perpage,hang]{footmisc}
2088 \fi
2089 \RequirePackage{bbding}
2090 \ifheu@pifootnote
2091   \RequirePackage{pifont}
2092 \fi
2093 \RequirePackage{xeCJKfntef}
2094 \RequirePackage{diagbox}
2095 \RequirePackage{longtable}
2096 \RequirePackage{booktabs}

```

```

2097 \RequirePackage[sort&compress,numbers]{natbib}
2098 \RequirePackage{hyperref}
2099 \hypersetup{%
2100   CJKbookmarks=true,
2101   linktoc=all,
2102   bookmarksnumbered=true,
2103   bookmarksopen=true,
2104   bookmarksopenlevel=1,
2105   breaklinks=true,
2106   colorlinks=false,
2107   plainpages=false,
2108   pdfborder=0 0 0}
2109 \urlstyle{same}
2110
2111 \RequirePackage{geometry}
2112 \geometry{
2113   a4paper,
2114   hcentering,
2115   ignoreall,
2116   nomarginpar,
2117   centering,
2118   text={150true mm,236true mm},
2119   left=30true mm,
2120   head=5true mm,
2121   headsep=2true mm,
2122   footskip=0true mm,
2123   foot=5.2true mm
2124 }
2125
2126 \ifheu@debug%
2127 \RequirePackage{layout}
2128 \RequirePackage{layouts}
2129 \RequirePackage{lineno}
2130 \fi
2131
2132 \RequirePackage{fancyhdr}
2133 \RequirePackage{tabularx}
2134 \RequirePackage{varwidth}
2135 \RequirePackage{changepage}
2136 \RequirePackage{multicol}
2137 \RequirePackage[below]{placeins}% 允许上一个 section 的浮动图形出现在下一个 section
    的开始部分，还提供\FloatBarrier 命令，使所有未处理的浮动图形立即被处理
2138 \RequirePackage{flafter}           % 使得所有浮动体不能被放置在其浮动环境之前，以免浮动
    体在引述它的文本之前出现。
2139 \RequirePackage{multirow}          % 使用 Multirow 宏包，使得表格可以合并多个 row 格
2140 \RequirePackage{subfigure}          % 支持子图 %centerlast 设置最后一行是否居中
2141 \RequirePackage[subfigure]{ccaption} % 支持双语标题
2142 \RequirePackage{xltextra}
2143
2144 \renewcommand\normalsize{%

```



```

2145 \setfontsize\normalsize{12bp}{20.50398bp}%
2146 \abovedisplayskip=8pt
2147 \abovedisplayshortskip=8pt
2148 \belowdisplayskip=\abovedisplayskip
2149 \belowdisplayshortskip=\abovedisplayshortskip}
2150
2151 \def\heu@def@fontsize#1#2{%
2152 \expandafter\newcommand\csname #1\endcsname[1][1.3]{%
2153 \fontsize{#2}{##1\dimexpr #2}\selectfont}}
2154 \heu@def@fontsize{dachu}{58.0bp}
2155 \heu@def@fontsize{chuhao}{42.2bp}
2156 \heu@def@fontsize{xiaochu}{36.1bp}
2157 \heu@def@fontsize{yihao}{26.1bp}
2158 \heu@def@fontsize{xiaoyi}{24.1bp}
2159 \heu@def@fontsize{erhao}{22.1bp}
2160 \heu@def@fontsize{xiaoer}{18.1bp}
2161 \heu@def@fontsize{sanhao}{16.1bp}
2162 \heu@def@fontsize{xiaosan}{15.1bp}
2163 \heu@def@fontsize{sihao}{14.1bp}
2164 \heu@def@fontsize{banxiaosi}{13.0bp}
2165 \heu@def@fontsize{xiaosi}{12.1bp}
2166 \heu@def@fontsize{dawu}{11.0bp}
2167 \heu@def@fontsize{wuhao}{10.5bp}
2168 \heu@def@fontsize{xiaowu}{9.0bp}
2169 \heu@def@fontsize{liuhao}{7.5bp}
2170 \heu@def@fontsize{xiaoliu}{6.5bp}
2171 \heu@def@fontsize{qihao}{5.5bp}
2172 \heu@def@fontsize{bahao}{5.0bp}
2173
2174 %-- 设置字号 --%
2175 \ctexset{%
2176 section={
2177 afterindent=true,
2178 beforeskip={7.5bp},% 上下空 0.5 行
2179 afterskip={7.5bp},
2180 format={\heiti\xiaosan[1.25]},
2181 aftername=\enspace,
2182 fixskip=true,
2183 break={},
2184 },
2185 subsection={
2186 afterindent=true,
2187 beforeskip={7bp},
2188 afterskip={7bp},
2189 format={\heiti\sihao[1.25]},
2190 aftername=\enspace,
2191 fixskip=true,
2192 break={},
2193 },
2194 subsubsection={

```

```

2195     afterindent=true,
2196     beforeskip={3bp},
2197     afterskip={3bp},
2198     format={\heiti\normalsize},
2199     aftername=\enspace,
2200     fixskip=true,
2201     break={},
2202 },
2203 paragraph/afterindent=true,
2204 subparagraph/afterindent=true
2205 }
2206
2207 \def\heu@def@term#1{%
2208   \define@key{heu}{#1}{\csname #1\endcsname{##1}}
2209   \expandafter\gdef\csname #1\endcsname##1{%
2210     \expandafter\gdef\csname heu@#1\endcsname{##1}}
2211   \csname #1\endcsname{}}
2212
2213 \heu@def@term{ctitlecover} % 中文标题封面
2214 \heu@def@term{csubject}
2215 \heu@def@term{cauthor}
2216 \heu@def@term{cstudentid}
2217 \heu@def@term{cclassid}
2218 \heu@def@term{caffil}
2219 \heu@def@term{csupervisor}
2220 \heu@def@term{csubmitdate}
2221 \heu@def@term{coralexdate}
2222 \heu@def@term{cdate}
2223
2224 \def\heu@parse@keywords#1{
2225   \define@key{heu}{#1}{\csname #1\endcsname{##1}}
2226   \expandafter\gdef\csname heu@#1\endcsname{
2227     \expandafter\gdef\csname #1\endcsname##1{
2228       \@for\reserved@a:=##1\do{
2229         \expandafter\ifx\csname heu@#1\endcsname\@empty\else
2230         \expandafter\g@addto@macro\csname heu@#1\endcsname{%
2231           \ignorespaces\csname heu@#1\separator\endcsname}
2232         \fi
2233         \expandafter\expandafter\expandafter\g@addto@macro%
2234         \expandafter\csname heu@#1\endcsname\expandafter\endcsname\expandafter{\reserved@a}}}}
2235
2236 \def\heu@setup{\kvsetkeys{heu}}
2237
2238 \newcommand{\heu@report@titlepage@graduate}{
2239   \ifthenelse%
2240   {\equal{\heu@fontset}{siyuan}}%
2241   {\xiaosi[1]\vspace*{0.65em}}%
2242   {\xiaosi[1]\textcolor{rgb}{1,1,1}{\songti{\heu@motto}}}%

```

开题报告封面

```

2243 \vspace*{10mm}
2244 \begin{center}
2245 \kaishu\xiaoer\textbf{\heucschoolname\ifheu@qingdao\heu@qingdaocampus\fi\ifheu@yan
2246 \end{center}
2247 \vspace{1mm}
2248 \begin{center}
2249 \songti\erhao\textbf{\heucxuewei\heu@cthesisname
2250 \ifheu@opening
2251 \heu@stage@opening
2252 \else
2253 \ifheu@midterm
2254 \heu@stage@midterm
2255 \fi
2256 \fi
2257 \heu@stage@doctype
2258 }
2259 \end{center}
2260 \vspace{10mm}
2261 \parbox[t][3cm][t]{\textwidth}{
2262 \begin{center}
2263 \songti\xiaoer\textbf{\heucthesistitleprefix\heu@title@csep\heu@ctitlecover}
2264 \end{center}
2265 }
2266 \parbox[b][3cm][t]{\textwidth}{
2267 \begin{center}\songti\sanhao
2268 \renewcommand{\arraystretch}{1.8}
2269 \begin{tabular}{l@{\ \ }c}
2270 \textbf{\heu@graduate@caffiltitle;} & \underline{\makebox[6.1cm]{\textbf{\heu@
2271 \textbf{\heu@graduate@cmajortitle;} & \underline{\makebox[6.1cm]{\textbf{\heu@
2272 \textbf{\heu@graduate@supervisor;} & \underline{\makebox[6.1cm]{\textbf{\heu@c
2273 \textbf{\heu@graduate@studenttitle;} & \underline{\makebox[6.1cm]{\textbf{\heu@
2274 \textbf{\heu@graduate@studentid;} & \underline{\makebox[6.1cm]{\textbf{\heu@cs
2275 \textbf{\heu@graduate@datetitle;} & \underline{\makebox[6.1cm]{\textbf{\heu@cd
2276 \end{tabular}\renewcommand{\arraystretch}{1}
2277 \end{center}
2278 }
2279 \vfill
2280 \ifheu@harbin
2281 \heu@harbin@schoolbottommark
2282 \else
2283 \ifheu@qingdao
2284 \heu@qingdao@schoolbottommark
2285 \else
2286 \ifheu@yantai
2287 \heu@yantai@schoolbottommark
2288 \fi
2289 \fi
2290 }
2291
2292 \newcommand{\heu@report@titlepage@bachelor}{

```

```

2293 \ifthenelse%
2294 {\equal{\heu@fontset}{siyuan}}%
2295 {\xiaosi[1]\vspace*{0.65em}}%
2296 {\xiaosi[1]\textcolor{rgb}{1,1,1}{\songti{\heu@motto}}}%
2297 \vspace*{10mm}
2298 \begin{center}
2299 \includegraphics[width=6.2cm]{heulogo}
2300 \end{center}
2301 \begin{center}
2302 \songti\xiaoyi\textbf{\heu@bachelor@cthesisname
2303 \ifheu@opening
2304 \heu@stage@opening
2305 \else
2306 \ifheu@midterm
2307 \heu@stage@midterm
2308 \fi
2309 \fi
2310 \heu@stage@doctype
2311 }
2312 \end{center}
2313 \vspace{15mm}
2314 \parbox[t][4.0cm][t]{\textwidth}{
2315 \begin{center}
2316 \songti\xiaoer\textbf{\heu@cthesisitleprefix\heu@title@csep\heu@ctitlecover}
2317 \end{center}
2318 }
2319 \parbox[b][6cm][t]{\textwidth}{
2320 \begin{center}\songti\sanhao
2321 \renewcommand{\arraystretch}{2.1}
2322 \begin{tabular}{l@{\ }c}
2323 \textbf{\heu@bachelor@cmajortitle} & \underline{\makebox[6.1cm]{\textbf{\heu@c
2324 \textbf{\heu@bachelor@cstudenttitle} & \underline{\makebox[6.1cm]{\textbf{\heu@
2325 \textbf{\heu@bachelor@cstudentidtitle} & \underline{\makebox[6.1cm]{\textbf{\heu@
2326 \textbf{\heu@bachelor@csupervisortitle} & \underline{\makebox[6.1cm]{\textbf{\heu@
2327 \textbf{\heu@bachelor@cdateititle} & \underline{\makebox[6.1cm]{\textbf{\heu@c
2328 \end{tabular}\renewcommand{\arraystretch}{1}
2329 \end{center}
2330 }
2331 \vfill
2332 \ifheu@yantai
2333 \relax
2334 \else
2335 \heu@harbin@bachelor@schoolbottommark
2336 \fi
2337 }
2338
2339 \newcommand{\heu@report@backpage@bachelor}{
2340 \thispagestyle{empty}
2341 \noindent\parbox[t][6.5cm][t]{\textwidth}{\heu@bachelor@teachercomment}
2342 \noindent\parbox[b][6cm][t]{\textwidth}{\heu@bachelor@teachersign\underline{\makebox[

```

```

2343 }
2344
2345 \renewcommand\tableofcontents{%
2346   \thispagestyle{empty}
2347   \normalsize\@starttoc{toc}
2348 }
2349
2350 \def\makecover{
2351   \begin{titlepage}
2352     \ifheu@bachelor
2353       \heu@report@titlepage@bachelor
2354     \else
2355       \heu@report@titlepage@graduate
2356     \fi
2357     \clearpage
2358     \ifheu@toc
2359       \tableofcontents
2360     \clearpage
2361     \fi
2362   \end{titlepage}
2363 }
2364 \def\makebackcover{
2365   \clearpage
2366   \heu@report@backpage@bachelor
2367 }
2368
2369 \newcommand\bibstyle@numerical{\bibpunct{[ ]}{,}{s}{,}{\textsuperscript{,}}{}}
2370 \newcommand\bibstyle@inline{\bibpunct{[ ]}{,}{n}{,}{\heu@inline@sep}}
2371
2372 \citestyle{numerical}
2373 \DeclareRobustCommand\inlinecite{\@inlinecite}
2374 \def\@inlinecite#1{\begingroup\citestyle{inline}\let\@cite\NAT@citenum\citep{#1}\endgroup}
2375 \let\onlinecite\inlinecite
2376 \newcommand{\lcite}{\inlinecite}
2377 \renewenvironment{thebibliography}[1]{%
2378   \list{\@biblabel{\@arabic{c@enumiv}}}%
2379   {\renewcommand{\makelabel}[1]{##1\hfill}
2380     \settowidth{\labelwidth}{\@biblabel{#1}}
2381     \setlength{\labelsep}{0.5em}
2382     \setlength{\itemindent}{0pt}
2383     \setlength{\leftmargin}{\labelsep+\labelwidth}
2384     \addtolength{\itemsep}{-0.8em}
2385     \usecounter{enumiv}%
2386     \let\p@enumiv\@empty
2387   \renewcommand\theenumiv{\@arabic{c@enumiv}}%
2388   \sloppy\flushbottom
2389   \clubpenalty0
2390   \@clubpenalty \clubpenalty
2391   \widowpenalty0%

```

```

2393 \interlinepenalty-50%
2394 \sfcode`\.\@m}
2395 {\def\@noitemerr
2396   {\@latex@warning{Empty `thebibliography' environment}}}%
2397 \endlist\frechspacing}
2398 \AtEndOfClass{\input{heuthesisart.cfg}}
2399 \AtEndOfClass{\sloppy}
2400 </artcls>

```

4.2 定义选项

```
2401 <*bookcls>
```

此处添加 **book** 控制项，用于 **cfg** 中定理等控制

```

2402 \RequirePackage{ifthen}
2403 \RequirePackage{kvoptions}
2404 \SetupKeyvalOptions{
2405   family=heu,
2406   prefix=heu@,
2407   setkeys=\kvsetkeys}
2408 \newif\ifheu@bachelor
2409 \newif\ifheu@master
2410 \newif\ifheu@doctor
2411 \newif\ifheu@postdoc
2412 \define@key{heu}{type}{%
2413   \heu@bachelorfalse
2414   \heu@masterfalse
2415   \heu@doctorfalse
2416   \heu@postdocfalse
2417   \expandafter\csname heu@#1true\endcsname}

```

此处设置专业学位论文研究类型，没有明确给出时默认为应用研究型。

```

2418 \newif\ifheu@productdevelopment
2419 \newif\ifheu@projectdplanning
2420 \newif\ifheu@projectdesign
2421 \newif\ifheu@applicationresearch
2422 \define@key{heu}{researchtype}{%
2423   \heu@productdevelopmentfalse
2424   \heu@projectdplanningfalse
2425   \heu@projectdesignfalse
2426   \heu@applicationresearchfalse
2427   \expandafter\csname heu@#1true\endcsname}
2428 \ifheu@productdevelopment\relax\else
2429 \ifheu@projectdplanning\relax\else
2430 \ifheu@projectdesign\relax\else
2431 \heu@applicationresearchtrue
2432 \fi
2433 \fi
2434 \fi

```

此处设置校区，没有明确给出烟台或者青岛时候，默认为哈尔滨校区。

```

2435 \newif\ifheu@qingdao
2436 \newif\ifheu@yantai

```

```

2437 \newif\ifheu@harbin
2438 \define@key{heu}{campus}{%
2439   \heu@qingdaofalse
2440   \heu@yantaifalse
2441   \heu@harbinfalse
2442   \expandafter\csname heu@#1true\endcsname}
2443 \ifheu@yantai\relax\else
2444 \ifheu@qingdao\relax\else
2445 \heu@harbintrue
2446 \fi
2447 \fi

```

设置版芯。

```

2448 \newif\ifheu@english
2449 \newif\ifheu@chinese
2450 \define@key{heu}{language}{%
2451   \heu@englishfalse
2452   \heu@chinesefalse
2453   \expandafter\csname heu@#1true\endcsname}
2454 \ifheu@english\relax\else
2455 \heu@chinesettrue
2456 \fi
2457 \newif\ifheu@geometrynewone
2458 \newif\ifheu@geometrynewtwo
2459 \newif\ifheu@geometrynewno
2460 \define@key{heu}{newgeometry}{%
2461   \heu@geometrynewonefalse
2462   \heu@geometrynewtwofalse
2463   \heu@geometrynewnofalse
2464   \expandafter\csname heu@geometrynew#1true\endcsname}

```

设置字距选项，因为 **word** 和规范不一致

```

2465 \newif\ifheu@zijvregu
2466 \newif\ifheu@zijvword
2467 \define@key{heu}{zijv}{%
2468   \heu@zijvregufalse
2469   \heu@zijvwordfalse
2470   \expandafter\csname heu@zijv#1true\endcsname}

```

设置中文参考文献中相邻两个标号使用逗号“,”还是短线“-”。

```

2471 \newif\ifheu@citetwocomma
2472 \newif\ifheu@citetwoendash
2473 \heu@citetwoendashtrue
2474 \define@key{heu}{citetwo}{%
2475   \heu@citetwocommafalse
2476   \heu@citetwoendashfalse
2477   \expandafter\csname heu@citetwo#1true\endcsname
2478 }

```

目录中英文是否用 **Arial** 字体（默认关闭）。

```

2479 \DeclareBoolOption[false]{arialtoc}

```

章节标题中的英文是否用 **Arial** 字体（默认打开）。

```
2480 \DeclareBoolOption[false]{arialtitle}
```

raggedbottom 选项（默认开启）。如果不开启这个选项，会出现一页中尽量上下对齐，段的间距大。如果开启，尽量使段间距保持一致，页面底部出现空白。

```
2481 \DeclareBoolOption[true]{raggedbottom}
```

在脚注标记中使用 pifont 的带圈数字（默认使用）。

```
2482 \DeclareBoolOption[true]{pifootnote}
```

字体间距设置（默认关闭）。

```
2483 \DeclareBoolOption[false]{glue}
```

文科生四级目录设置（默认关闭）。

```
2484 \DeclareBoolOption[false]{tocfour}
```

章标题是否悬挂居中（默认开启）

```
2485 \DeclareBoolOption[true]{chapterhang}
```

是否是专业学位（默认否）。

```
2486 \DeclareBoolOption[false]{profdegree}
```

是否有子标题（默认是）。

```
2487 \DeclareBoolOption[false]{subtitle}
```

是否开启 **debug** 模式（默认否）。如果开启，载入显示行号等的包，只为开发调试用。

```
2488 \DeclareBoolOption[false]{debug}
```

是否使用右开页（默认否）。

```
2489 \DeclareBoolOption[false]{openright}
```

空白页是否无页眉页脚（默认否）。

```
2490 \DeclareBoolOption[false]{pageempty}
```

是否为提交图书馆电子版。

```
2491 \DeclareBoolOption[false]{library}
```

图题和标题最后一行是否居中对其（默认是，非规范要求）。

```
2492 \DeclareBoolOption[false]{capcenterlast}
```

子图图题和标题最后一行是否居中对其（默认是，非规范要求）。

```
2493 \DeclareBoolOption[false]{subcapcenterlast}
```

中文目录中 **Abstract** 是否均为大写

```
2494 \DeclareBoolOption[false]{absupper}
```

此处添加控制本科论文的页码横线选项

```
2495 \DeclareBoolOption[false]{bsmainpagenumberline}
```

```
2496 \DeclareBoolOption[false]{bsfrontpagenumberline}
```

```
2497 \DeclareBoolOption[true]{bsheadrule}
```

数学字体是否使用新罗马

```
2498 \DeclareBoolOption[true]{newtxmath}
```

添加参考文献分割开关

```
2499 \DeclareBoolOption[false]{splitbibitem}
```

此处添加英文目录开关

```
2500 \DeclareBoolOption[false]{engtoc}
```

声明字体选项。

```
2501 \DeclareStringOption{fontset}
```


将其余选项默认传递给 ctexbook。

```
2502 \DeclareDefaultOption{\PassOptionsToClass{\CurrentOption}{ctexbook}}
```

解析用户传递过来的选项，并加载 ctexbook。

```
2503 \ProcessKeyvalOptions*
```

使用 XeTeX 引擎时，fontspec 宏包会被 xeCJK 自动调用。传递给 fontspec 宏包 no-math 选项，避免部分数学符号字体自动调整为 CMR。其他引擎下没有这个问题，这一行会被无视。

```
2504 \PassOptionsToPackage{no-math}{fontspec}
```

载入单双面打印设置，默认本、硕、博均采用双面打印。

```
2505 \ifheu@bachelor
```

```
2506 \PassOptionsToClass{twoside}{book}
```

```
2507 \fi
```

```
2508 \ifheu@master
```

```
2509 \PassOptionsToClass{twoside}{book}
```

```
2510 \fi
```

```
2511 \ifheu@doctor
```

```
2512 \PassOptionsToClass{twoside}{book}
```

```
2513 \fi
```

设置字体。由于宋体没有粗体，且我校模板的标题要求使用粗宋体，于是面临 CTeX 的经典的伪粗体 bug：“首次出现伪粗体字体之后的正常字体无法复制”。但如果使用自带宋体的思源字体，那么不必使用伪粗体。模板只给出了新 windows 字体的思源字体设置，且思源字体版本为 Adobe 版。

```
2514 \ifthenelse%
```

```
2515 {\equal{\heu@fontset}{}}%
```

```
2516 {%
```

```
2517 \PassOptionsToPackage{AutoFakeBold=2}{xeCJK}
```

```
2518 }%
```

```
2519 {%
```

```
2520 \ifthenelse%
```

```
2521 {\equal{\heu@fontset}{siyuan}}%
```

```
2522 {\relax}%
```

```
2523 {%
```

```
2524 \PassOptionsToPackage{AutoFakeBold=2}{xeCJK}
```

```
2525 }%
```

```
2526 \PassOptionsToClass{fontset=\heu@fontset}{ctexbook}
```

```
2527 }%
```

使用 ctexbook 类，优于调用 ctex 宏包。

```
2528 \LoadClass[a4paper,openany,UTF8,zihao=-4,scheme=plain]{ctexbook}
```

用户至少要提供一个选项，指定论文类型。

```
2529 \ifheu@bachelor\relax\else
```

```
2530 \ifheu@master\relax\else
```

```
2531 \ifheu@doctor\relax\else
```

```
2532 \ifheu@postdoc\relax\else
```

```
2533 \ClassError{heuthesis}%
```

```
2534 {Please specify thesis type in option: \MessageBreak
```

```
2535 type=[bachelor | master | doctor | postdoc]}{}
```

```
2536 \fi
```

```
2537 \fi
```

```
2538 \fi
2539 \fi
```

设置字距默认选项

```
2540 \ifheu@zijvregu\relax\else
2541 \ifheu@zijvword\relax\else
2542 \heu@zijvreguttrue
2543 \fi
2544 \fi
```

重新设置 geometry 的默认选项

```
2545 \ifheu@geometrynewone\relax\else
2546 \ifheu@geometrynewtwo\relax\else
2547 \ifheu@geometrynewno\relax\else
2548 \heu@geometrynewtwottrue
2549 \fi
2550 \fi
2551 \fi
```

2552 % 设置专业学位论文类型

```
2553 % \begin{macrocode}
2554 \ifheu@profdegree{
2555 \ifheu@productdevelopment\relax\else
2556 \ifheu@projectdplanning\relax\else
2557 \ifheu@projectdesign\relax\else
2558 \ifheu@applicationresearch\relax\else
2559 \ClassError{heuthesisartplus}%
2560 { Please specify researchtype in option:\MessageBreak
2561 researchtype=[productdevelopment | projectdplanning | projectdesign | applica
2562 ]{}
2563 \fi
2564 \fi
2565 \fi
2566 \fi}
2567 \fi
```

4.3 装载宏包

引用的宏包和相应的定义。

```
2568 \RequirePackage{etoolbox}
2569 \RequirePackage{ifxetex}
2570 \ifxetex
2571 \else
2572 \ClassError{heuthesis}%
2573 { Please use: \MessageBreak
2574 xelatex}{}
2575 \fi
2576 \RequirePackage{xparse}
```

$\mathcal{A}\mathcal{M}\mathcal{S}$ - $\mathcal{T}\mathcal{E}\mathcal{X}$ 宏包，用来排出更加漂亮的公式。

```
2577 \RequirePackage{amsmath}
```

定理类环境宏包，其中 amsmath 选项用来兼容 $\mathcal{A}\mathcal{M}\mathcal{S}$ - $\mathcal{T}\mathcal{E}\mathcal{X}$ 的宏包

```
2578 \RequirePackage[amsmath,thmmarks,hyperref]{ntheorem}
```

```
2579 \RequirePackage{amssymb}
```

设置默认英文字体。

```
2580 \setmainfont{Times New Roman}
```

```
2581 \setsansfont{Arial}
```

```
2582 \setmonofont{Courier New}
```

单独使用 newtxmath 宏包改变数学字体时，会使 operators, \mathrm, \mathit, \mathbf 命令使用 CM 字体，根据 [SJTUThesis 的字体设置](#) 进行调整

```
2583 \ifheu@newtxmath
```

```
2584 \let\oldencodingdefault\encodingdefault
```

```
2585 \let\oldrmdefault\rmdefault
```

```
2586 \let\oldsfdefault\sfdefault
```

```
2587 \let\oldttdefault\ttdefault
```

```
2588 \def\encodingdefault{T1}
```

```
2589 \renewcommand{\rmdefault}{ntxtlf}
```

```
2590 \renewcommand{\sfdefault}{qhv}
```

```
2591 \renewcommand{\ttdefault}{ntxtt}
```

```
2592 \RequirePackage{newtxmath}
```

```
2593 \let\encodingdefault\oldencodingdefault
```

```
2594 \let\rmdefault\oldrmdefault
```

```
2595 \let\sfdefault\oldsfdefault
```

```
2596 \let\ttdefault\oldttdefault
```

```
2597 \fi
```

图形支持宏包。

```
2598 \RequirePackage{graphicx}
```

pdfpages 宏包便于我们插入扫描后的授权页和声明页 PDF 文档。

```
2599 \RequirePackage{pdfpages}
```

```
2600 \includepdfset{fitpaper=true}
```

更好的列表环境。

```
2601 \RequirePackage{enumitem} % 使用 enumitem 宏包，改变列表项的格式
```

```
2602 \RequirePackage{environ}
```

更细微的调整文字间距。

```
2603 \RequirePackage{microtype} % 微调字体间距
```

禁止 L^AT_EX 自动调整多余的页面底部空白，并保持脚注仍然在底部。脚注按页编号。

```
2604 \ifheu@raggedbottom
```

```
2605 \RequirePackage[bottom,perpage,hang]{footmisc}
```

```
2606 \raggedbottom
```

```
2607 \else
```

```
2608 \RequirePackage[perpage,hang]{footmisc}
```

```
2609 \fi
```

扩展符号字符宏包。

```
2610 \RequirePackage{bbding}
```

```
2611 \ifheu@pifootnote
```

```
2612 \RequirePackage{pifont}
```

```
2613 \fi
```

利用 `xeCJKfntef` 实现汉字的下划线和盒子内两段对齐,并可以避免 `\makebox[\langle width \rangle][\langle s \rangle]` 可能产生的 **underful boxes**。

```
2614 \RequirePackage{xeCJKfntef}
```

表格控制

```
2615 \RequirePackage{diagbox}
```

```
2616 \RequirePackage{longtable}
```

使用三线表: `\toprule`, `\midrule`, `\bottomrule`。

```
2617 \RequirePackage{booktabs}
```

重定义 `booktabs` 宏包的默认线宽,绘制三线表时不再需要显式设置,以实现更好的内容与格式分离

```
2618 \heavyrulewidth=1.5pt
```

```
2619 \lightrulewidth=1pt
```

```
2620 \cmidrulewidth=0.5pt
```

参考文献引用宏包。

```
2621 % \RequirePackage[sort&compress]{natbib}
```

生成有书签的 pdf 及其开关,请结合 `gbk2uni` 避免书签乱码。

```
2622 \RequirePackage{hyperref}
```

```
2623 \hypersetup{%
```

```
2624   CJKbookmarks=true,
```

```
2625   linktoc=all,
```

```
2626   bookmarksnumbered=true,
```

```
2627   bookmarksopen=true,
```

```
2628   bookmarksopenlevel=1,
```

```
2629   breaklinks=true,
```

```
2630   colorlinks=false,
```

```
2631   plainpages=false,
```

```
2632   pdfborder=0 0 0}
```

设置 `url` 样式,与上下文一致

```
2633 \urlstyle{same}
```

引用文献标准 GBT2015

```
2634 \RequirePackage[sort&compress]{gbt7714}
```

```
2635 \ifheu@citetwocomma
```

```
2636   \patchcmd{\NAT@citexnum}{\def@NAT@last@yr{-\NAT@penalty}}{
```

```
2637   {%
```

```
2638     \ifx\NAT@last@yr\relax
```

```
2639     \def@NAT@last@yr{\@citea}%
```

```
2640     \else
```

```
2641     \def@NAT@last@yr{-\NAT@penalty}%
```

```
2642     \fi
```

```
2643   }%
```

```
2644   {\typeout{Use comma between neighboring citations}}%
```

```
2645   {\ClassError{heuhesisbook}{fail to patch \NAT@citexnum}{}}%
```

```
2646 \fi
```

4.4 页面设置

这部分是根据 哈尔滨工程大学研院函〔2010〕26 号《关于调整研究生学位论文版面大小的通知》的规定：“版面一律改成 A4 纸页边距上、下设置为 28mm，左、右设置为 25mm，页眉、页脚设置为 20mm。装订时上、下、右各切除 3mm，学位论文成品版面大小为 207mm*291mm”要求设置。论文尺寸为 207x291mm，版芯尺寸 140x220mm，版心距左边 25mm，距右边 20mm，距上下边各 20mm。这里只设置版心尺寸和版心距左边距尺寸，其他尺寸由装订裁切进行控制。

```
2647 \ifheu@debug\RequirePackage[showframe]{geometry}\else\RequirePackage{geometry}\fi
2648 \geometry{% 版芯定义
2649   a4paper, % 210 * 297mm
2650   hcentering,
2651   ignoreall,
2652   nomarginpar,
2653   centering,
2654   text={160true mm,241true mm},
2655   left=25true mm,
2656   head=20true mm,
2657   headsep=2true mm,
2658   footskip=0true mm,
2659   foot=6true mm
2660 }
```

载入显示行号的包。

```
2661 \ifheu@debug%
2662 \RequirePackage{layout}
2663 \RequirePackage{layouts}
2664 \RequirePackage{lineno}
2665 \fi
```

利用 fancyhdr 设置页眉页脚。

```
2666 \RequirePackage{fancyhdr}
```

其他包，表格、数学符号包子图最后一行图题是否居中选项

```
2667 \RequirePackage{tabularx}
2668 \RequirePackage{varwidth}
```

此处 changepage 环境用来控制索引页面的左右边距，规范中给出的示例的边距要大于正文。

```
2669 \RequirePackage{changepage}
2670 \RequirePackage{multicol}
2671 \RequirePackage[below]{placeins}% 允许上一个 section 的浮动图形出现在下一个 section
    的开始部分，还提供\FloatBarrier 命令，使所有未处理的浮动图形立即被处理
2672 \RequirePackage{flafter} % 使得所有浮动体不能被放置在其浮动环境之前，以免浮动
    体在引述它的文本之前出现。
2673 \RequirePackage{multirow} % 使用 Multirow 宏包，使得表格可以合并多个 row 格
2674 \ifheu@subcapcenterlast
2675 \PassOptionsToPackage{centerlast}{subfigure}
2676 \fi
2677 \RequirePackage{subfigure}% 支持子图 %centerlast 设置最后一行是否居中
2678 \RequirePackage[subfigure]{ccaption} % 支持双语标题
```

中英文索引包。

```
2679 \RequirePackage[makeindex]{splitidx}
2680 \newindex[] {china}
2681 \newindex[] {english}
2682 </bookcls>
```

索引格式。

```
2683 <*ist>
2684 headings_flag 1
2685 heading_prefix "\\vskip -\\baselineskip\\centering\\normalsize\\textbf{"
2686 heading_suffix "\\par}\\nopagebreak\\wuhao\\n"
2687 delim_0 "\\hspace*{\\fill}"
2688 delim_1 "\\hspace*{\\fill}"
2689 </ist>
```

排版 logo。

```
2690 <bookcls>\RequirePackage{xltextra}
```

4.5 主文档格式

4.5.1 页面选项

`\cleardoublepage` 对于 *openright* 选项，必须保证章首页右开。如果 *library* 为真，则强制设置 *openright* 为真。

```
2691 <*bookcls>
2692 \ifheu@english
2693 \RequirePackage[xindy,order=letter]{glossaries-extra}
2694 \newglossarystyle{engstyle}{%
2695   \setglossarystyle{long}%
2696   \renewenvironment{theglossary}%
2697     {\vspace{-\intextsep}\centering\begin{longtable}{@{\hskip 1cm}p{3.5cm}p{\glsdescwidth}
2698       {\end{longtable}}}
2699 \setabbreviationstyle[acronym]{long-short}
2700 \else
2701 \RequirePackage{glossaries}
2702 \setacronymstyle{short-long}
2703 \fi
2704
2705 \renewcommand*{\genacrfullformat}[2]{%
2706   \glsentrylong{#1}%
2707 }
2708 \ifheu@english
2709 \makenoidxglossaries
2710 \else
2711 \makeglossaries
2712 \fi
2713 \ifheu@library\heu@openrightfalse\else\relax\fi
2714 \ifheu@pageempty
2715   \let\heu@cleardoublepage\cleardoublepage
2716   \newcommand{\heu@cleareptydoublepage}{%
2717     \clearpage{\pagestyle{heu@empty}\heu@cleardoublepage}
2718   }
```

```
2719 \let\cleardoublepage\heu@clearempydoublepage
2720 \fi
```

\frontmatter 我们的单面和双面模式与常规的不太一样。

```
2721 \renewcommand\frontmatter{%
2722 \ifheu@openright\cleardoublepage\else\clearpage\fi
2723 \@mainmatterfalse
2724 \pagenumbering{Roman}
2725 \pagestyle{heu@empty}
```

设置字距

```
2726 \ifheu@openright\cleardoublepage\else\clearpage\fi
2727 \ifheu@zijvword
2728 \ziju{0.05416667}
2729 \else
2730 \ifheu@zijvregu
2731 \ziju{0.05580808}
2732 \fi
2733 \fi
2734 }
```

\mainmatter 根据打印店操作，\mainmatter 命令的逻辑是，双面打印时第一章必须在奇数页设置第一章必须在奇数页

```
2735 \renewcommand\mainmatter{%
```

添加英文版限制

```
2736 \ifheu@doctor%
2737 \ifheu@library\clearpage\else\cleardoublepage\fi
2738 \else%
2739 \clearpage
2740 \fi%
2741 \@mainmattertrue
2742 \pagenumbering{arabic}
2743 \pagestyle{heu@headings}
2744 }
```

\backmatter 后文开页选项，根据 *openright* 选项决定分页方式。

```
2745 \renewcommand\backmatter{%
2746 \ifheu@openright\cleardoublepage\else\clearpage\fi
2747 \@mainmattertrue
2748 \fancyhf{}
2749 \pagestyle{heu@titleheadings}
2750 }
2751 \</bookcls>
```

4.5.2 字体

\normalsize 根据我校规定，正文小四号 (12bp) 字，但对行距没有给出明确要求。

```
2752 \<*bookcls>
```

1bp = 1/72 inch, 1 inch = 25.4 mm

```
2753 \renewcommand\normalsize{%
2754   \@setfontsize\normalsize{12bp}{\ifheuglue 20.50394bp \@plus 2.834646bp \@minus 0bp\
2755   \abovedisplayskip=8pt
2756   \abovedisplayshortskip=8pt
2757   \belowdisplayskip=\abovedisplayskip
2758   \belowdisplayshortskip=\abovedisplayshortskip}
```

WORD 中的字号对应该关系如下 (1bp = 72.27/72 pt) :

初号	42.2bp	14.82mm	42.1575pt
小初	36.1bp	12.70mm	36.135 pt
一号	26.1bp	9.17mm	26.0975pt
小一	24.1bp	8.47mm	24.09pt
二号	22.1bp	7.76mm	22.0825pt
小二	18.1bp	6.35mm	18.0675pt
三号	16.1bp	5.64mm	16.06pt
小三	15.1bp	5.29mm	15.05625pt
四号	14.1bp	4.94mm	14.0525pt
小四	12.1bp	4.23mm	12.045pt
五号	10.5bp	3.70mm	10.59375pt
小五	9.0bp	3.18mm	9.03375pt
六号	7.5bp	2.56mm	
小六	6.5bp	2.29mm	
七号	5.5bp	1.94mm	
八号	5.0bp	1.76mm	

\heugdef@fontsize 根据习惯定义字号。用法: `\heugdef@fontsize{<字号名称>}{<磅数>}` 避免了字号选择和行距的紧耦合。所有字号定义时为单倍行距, 并提供选项指定行距倍数。

```
2759 \def\heugdef@fontsize#1#2{%
2760   \expandafter\newcommand\csname #1\endcsname[1][1.3]{%
2761     \fontsize{#2}{##1\dimexpr #2}\selectfont}}
```

\dachu 一组字号定义。可以在论文中使用 `\fontsize` 格式指定, 如 `\sihao`。

\chuhao 2762 `\heugdef@fontsize{dachu}{58.0bp}`

\xiaochu 2763 `\heugdef@fontsize{chuhao}{42.2bp}`

\yihao 2764 `\heugdef@fontsize{xiaochu}{36.1bp}`

\xiaoyi 2765 `\heugdef@fontsize{yihao}{26.1bp}`

\erhao 2766 `\heugdef@fontsize{xiaoyi}{24.1bp}`

\xiaoer 2767 `\heugdef@fontsize{erhao}{22.1bp}`

\sanhao 2768 `\heugdef@fontsize{xiaoer}{18.1bp}`

\xiaosan 2769 `\heugdef@fontsize{sanhao}{16.1bp}`

\sihao 2770 `\heugdef@fontsize{xiaosan}{15.1bp}`

2771 `\heugdef@fontsize{sihao}{14.1bp}`

\banxiaosi 2772 `\heugdef@fontsize{banxiaosi}{13.0bp}`

2773 `\heugdef@fontsize{xiaosi}{12.1bp}`

\xiaosi 2774 `\heugdef@fontsize{dawu}{11.0bp}`

\dawu

\wuhao

\xiaowu

\liuhao

\xiaoliu


```

2775 \heu@def@fontsize{wuhao}{10.5bp}
2776 \heu@def@fontsize{xiaowu}{9.0bp}
2777 \heu@def@fontsize{liuhao}{7.5bp}
2778 \heu@def@fontsize{xiaoliu}{6.5bp}
2779 \heu@def@fontsize{qihao}{5.5bp}
2780 \heu@def@fontsize{bahao}{5.0bp}
2781 \bookcls

```

4.5.3 页眉页脚

\heu@empty 定义四种页眉页脚格式:

\heu@plain • heu@empty: 页眉页脚都没有

\heu@headings • heu@plain: 只显示页脚的页码。chapter 自动调用 \thispagestyle{heu@plain}。

\heu@titleheadings • heu@headings: 页眉页脚同时显示, 奇数页显示章节

• heu@titleheadings: 页眉页脚同时显示, 奇数页显示论文题目

```

2782 \bookcls
2783 \let\heu@headrule\headrule

```

空白页面页眉页脚格式控制

```

2784 \fancypagestyle{heu@empty}{%
2785   \fancyhf{}
2786   \let\headrule\heu@headrule%
2787   \renewcommand{\headrulewidth}{0pt}
2788   \renewcommand{\footrulewidth}{0pt}
2789 }

```

正文页眉页脚格式控制

```

2790 \fancypagestyle{heu@headings}{%
2791   \fancyhf{}
2792   \ifheu@english

```

英文版页眉格式控制

```

2793     \fancyhead[C]{\wuhao[0]\leftmark}
2794     \fancyfoot[C]{\wuhao\thepage}
2795     \renewcommand{\headrule}{
2796       \vskip 0.6mm
2797       \hrule\@height0.5mm\@width\headwidth
2798       \vskip 0.3mm
2799       \hrule\@height0.8mm\@width\headwidth
2800     }
2801   \else
2802     \ifheu@postdoc

```

博后页眉控制

```

2803       \fancyhead[CO]{\songti\wuhao[0]\leftmark}
2804       \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@postdoc@documenttitlenospace}
2805       \fi
2806     \ifheu@doctor
2807       \fancyhead[CO]{\songti\wuhao[0]\leftmark}
2808     \ifheu@harbin

```

```

2809      \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@cdegree\heu@cthesisname}
2810      \fi
2811      \ifheu@qingdao
2812      \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@qingdaocampus\heu@cdegree\heu@cthesisname}
2813      \fi
2814      \ifheu@yantai
2815      \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@yantaicampus\heu@cdegree\heu@cthesisname}
2816      \fi
2817      \fi
2818      \ifheu@master
2819      \fancyhead[CO]{\songti\wuhao[0]\leftmark}
2820      \ifheu@harbin
2821      \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@cdegree\heu@cthesisname}
2822      \fi
2823      \ifheu@qingdao
2824      \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@qingdaocampus\heu@cthesisname}
2825      \fi
2826      \ifheu@yantai
2827      \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@yantaicampus\heu@cdegree\heu@cthesisname}
2828      \fi
2829      \fi
2830      \ifheu@bachelor
2831      \fancyhead[CO]{\songti\wuhao[0]\leftmark}
2832      \ifheu@harbin
2833      \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@bachelor@cxuwei\heu@bachelor@cthesisname}
2834      \fi
2835      \ifheu@qingdao
2836      \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@qingdaocampus\heu@bachelor@cthesisname}
2837      \fi
2838      \ifheu@yantai
2839      \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@yantaicampus\heu@bachelor@cthesisname}
2840      \fi
2841      \fi
2842      \fancyfoot[C]{\wuhao\thepage}
2843      \renewcommand{\headrule}{
2844      \vskip 0.6mm
2845      \hrule\@height0.5mm\@width\headwidth
2846      \vskip 0.3mm
2847      \hrule\@height0.8mm\@width\headwidth
2848      }
2849      \fi
2850      \renewcommand{\footrulewidth}{0pt}
2851 }

```

前文页眉页脚格式控制（奇数页页眉为论文题目）

```

2852 %
2853 \fancypagestyle{heu@titleheadings}%
2854 { %
2855   \fancyhead{} %
2856   \fancyhead[CO]{\songti\wuhao[0]\heu@ctitle}

```

```

2857 \ifheu@postdoc
2858     \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@postdoc@documenttitlenospace}
2859 \fi
2860 \ifheu@doctor
2861     \ifheu@harbin
2862         \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@cdegree\heu@cthesisname}
2863     \fi
2864     \ifheu@qingdao
2865         \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@qingdaocampus\heu@cdegree\heu@cthesisname}
2866     \fi
2867     \ifheu@yantai
2868         \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@yantaicampus\heu@cdegree\heu@cthesisname}
2869     \fi
2870 \fi
2871 \ifheu@master
2872     \ifheu@harbin
2873         \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@cdegree\heu@cthesisname}
2874     \fi
2875     \ifheu@qingdao
2876         \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@qingdaocampus\heu@cthesisname}
2877     \fi
2878     \ifheu@yantai
2879         \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@yantaicampus\heu@cdegree\heu@cthesisname}
2880     \fi
2881 \fi
2882 \ifheu@bachelor
2883     \ifheu@harbin
2884         \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@bachelor@cxuwei\heu@bachelor@cdegree\heu@cthesisname}
2885     \fi
2886     \ifheu@qingdao
2887         \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@qingdaocampus\heu@bachelor@cxuwei\heu@cthesisname}
2888     \fi
2889     \ifheu@yantai
2890         \fancyhead[CE]{\songti\wuhao[0]\heu@cschoolname\heu@yantaicampus\heu@bachelor@cxuwei\heu@cthesisname}
2891     \fi
2892 \fi
2893 \fancyfoot[C]{\wuhao\thepage} % 只显示号码
2894 \renewcommand{\headrulewidth}{0pt} % 页眉线粗细
2895 \renewcommand{\footrulewidth}{0pt} % 页脚线粗细
2896 \renewcommand{\headrule}{
2897     \vskip 0.6mm
2898     \hrule\@height0.5mm\@width\headwidth
2899     \vskip 0.3mm
2900     \hrule\@height0.8mm\@width\headwidth
2901 }
2902 }
2903 \AtBeginDocument{%
2904     \pagestyle{heu@empty}
2905     \renewcommand{\chaptermark}[1]{\@mkboth{\CTEXthechapter\enspace#1}{}}
2906 \</bookcls>

```

4.5.4 段落

全文首行缩进 2 字符，标点符号用全角

```
2907 <*bookcls>
2908 \ctexset{%
2909   punct=quanjiao,
2910   space=auto,
2911   autoindent=true}
```

利用 `enumitem` 命令调整默认列表环境间的距离，以符合中文习惯。

```
2912 \setlist{nosep}
2913 </bookcls>
```

4.5.5 脚注

脚注符合中文习惯，数字带圈。

```
2914 <*bookcls>
2915 \def\heu@textcircled#1{%
2916   \ifnum\value{#1} >9
2917     \ClassError{heuthesis}%
2918       {Too many footnotes in this page.}{Keep footnote less than 10.}
2919   \fi
2920   \ifheu@pifootnote%
2921     \ding{\the\numexpr\value{#1}+171\relax}%
2922   \else%
2923     \textcircled{\xiaoliu\arabic{#1}}%
2924   \fi}
2925 \renewcommand{\thefootnote}{\heu@textcircled{footnote}}
2926 \renewcommand{\thempfootnote}{\heu@textcircled{mpfootnote}}
```

定义脚注分割线，字号（宋体小五），以及悬挂缩进（1.5 字符）。

```
2927 \def\footnoterule{\vskip-3\p@\hrule\@width0.3\textwidth\@height0.4\p@\vskip2.6\p@}
2928 \let\heu@footnotesize\footnotesize
2929 \renewcommand\footnotesize{\heu@footnotesize\xiaowu[1.5]}
2930 \footnotemargin1.5em\relax
```

`\@makefnmark` 默认是上标样式，而在脚注部分要求为正文大小。利用 `\patchcmd` 动态调整 `\@makefnmark` 的定义。

```
2931 \let\heu@makefnmark\@makefnmark
2932 \def\heu@@makefnmark{\hbox{\normalfont\@thefnmark}}
2933 \pretocmd{\@makefnmark}{\let\@makefnmark\heu@@makefnmark}{}{}
2934 \apptocmd{\@makefnmark}{\let\@makefnmark\heu@makefnmark}{}{}
2935 </bookcls>
```

4.5.6 数学相关

允许太长的公式断行、分页等。

```
2936 <*bookcls>
2937 \allowdisplaybreaks[4]
2938 \predisplaypenalty=0 % 公式之前可以换页，公式出现在页面顶部
2939 \postdisplaypenalty=0
```

设置公式编号方式为 X-n

```
2940 \renewcommand\theequation{\ifnum \c@chapter>\z@ \thechapter-\fi\@arabic\c@equation}
```

设置公式前后随意断页公式距前后文的距离由 4 个参数控制, 参见 `\normalsize` 的定义。同时为了让 `amsmath` 的 `\tag*` 命令得到正确的格式, 我们必须修改这些代码。`\make@df@tag` 是定义 `\tag*` 和 `\tag` 内部命令的。`\make@df@tag@@` 处理 `\tag*`, 我们就改它!

```
\def\make@df@tag{\@ifstar\make@df@tag@@\make@df@tag@@@}
\def\make@df@tag@@#1{%
  \gdef\df@tag{\maketag@@@{#1}\def\@currentlabel{#1}}}
```

```
2941 \def\make@df@tag{\@ifstar\heu@make@df@tag@@\make@df@tag@@@}
```

```
2942 \def\heu@make@df@tag@@#1{\gdef\df@tag{\heu@maketag{#1}\def\@currentlabel{#1}}}
```

```
2943 \iffalse
```

```
2944 \ifheu@bachelor
```

```
2945   \def\heu@maketag#1{\maketag@@@{\%
```

```
2946     (\ignorespaces\text{\equationname\hskip0.5em}#1\unskip\@italiccorr)}}}
```

```
2947   \def\tagform@#1{\maketag@@@{\%
```

```
2948     (\ignorespaces\text{\equationname\hskip0.5em}#1\unskip\@italiccorr)\equcaption{#1}}
```

```
2949 \fi
```

```
2950 \fi
```

```
2951 \def\heu@maketag#1{\maketag@@@{\ignorespaces #1\unskip\@italiccorr}}}
```

```
2952 \def\tagform@#1{\maketag@@@{\ignorespaces #1\unskip\@italiccorr)\equcaption{#1}}}
```

修改 `\tagform` 会影响 `\eqref`。

```
2953 \renewcommand{\eqref}[1]{\textup{(\ref{#1})}}
```

```
2954 \</bookcls>
```

定理标题使用黑体, 正文使用宋体, 冒号隔开。

```
2955 <*bookcfg>
```

```
2956 \theorembodyfont{\normalfont}
```

```
2957 \theoremsymbol{\ensuremath{\square}}
```

```
2958 \ifheu@english
```

```
2959 \theoremheaderfont{\normalfont\bf}
```

```
2960 \newtheorem*{proof}{Proof}
```

```
2961 \else
```

```
2962 \theoremheaderfont{\normalfont\heiti}
```

```
2963 \newtheorem*{proof}{证明}
```

```
2964 \fi
```

英文版黑体加粗

```
2965 \theoremstyle{plain}
```

```
2966 \theoremsymbol{}
```

```
2967 \theoremseparator{}
```

```
2968 \ifheu@english
```

```
2969 \newtheorem{assumption}{Assumption}[chapter]
```

```
2970 \newtheorem{definition}{Definition}[chapter]
```

```
2971 \newtheorem{proposition}{Proposition}[chapter]
```

```
2972 \newtheorem{lemma}{Lemma}[chapter]
```

```
2973 \newtheorem{theorem}{Theorem}[chapter]
```

```
2974 \newtheorem{axiom}{Axiom}[chapter]
```

```
2975 \newtheorem{corollary}{Corollary}[chapter]
```

```

2976 \newtheorem{exercise}{exercise}[chapter]
2977 \newtheorem{example}{Example}[chapter]
2978 \newtheorem{remark}{Remark}[chapter]
2979 \newtheorem{problem}{Problem}[chapter]
2980 \newtheorem{conjecture}{Conjecture}[chapter]
2981 \newtheorem{fact}{Fact}[chapter]
2982 \else
2983 \newtheorem{assumption}{假设}[chapter]
2984 \newtheorem{definition}{定义}[chapter]
2985 \newtheorem{proposition}{命题}[chapter]
2986 \newtheorem{lemma}{引理}[chapter]
2987 \newtheorem{theorem}{定理}[chapter]
2988 \newtheorem{axiom}{公理}[chapter]
2989 \newtheorem{corollary}{推论}[chapter]
2990 \newtheorem{exercise}{练习}[chapter]
2991 \newtheorem{example}{例}[chapter]
2992 \newtheorem{remark}{注释}[chapter]
2993 \newtheorem{problem}{问题}[chapter]
2994 \newtheorem{conjecture}{猜想}[chapter]
2995 \newtheorem{fact}{事实}[chapter]
2996 \fi
2997 </bookcfg>
2998 <*artcfg>
2999 \theorembodyfont{\normalfont}
3000 \theoremheaderfont{\normalfont\heiti}
3001 \theoremsymbol{\ensuremath{\square}}
3002 \newtheorem*{proof}{证明}
3003 \theoremstyle{plain}
3004 \theoremsymbol{}
3005 \theoremseparator{}
3006 \newtheorem{assumption}{假设}
3007 \newtheorem{definition}{定义}
3008 \newtheorem{proposition}{命题}
3009 \newtheorem{lemma}{引理}
3010 \newtheorem{theorem}{定理}
3011 \newtheorem{axiom}{公理}
3012 \newtheorem{corollary}{推论}
3013 \newtheorem{exercise}{练习}
3014 \newtheorem{example}{例}
3015 \newtheorem{remark}{注释}
3016 \newtheorem{problem}{问题}
3017 \newtheorem{conjecture}{猜想}
3018 \ctexset{%
3019   contentsname={目\hspace{\ccwd}录},
3020   figurename= 图,
3021   tablename= 表
3022 }
3023 \let\CJK@today save=\today
3024 \def\CJK@today small@short{\the\year 年 \the\month 月}
3025 \def\CJK@today small{\the\year 年 \the\month 月 \the\day 日}

```

```

3026 \def\CJK@todaybig@short{\zhdigits{\the\year} 年\zhnumber{\the\month} 月}
3027 \def\CJK@todaybig{\zhdigits{\the\year} 年\zhnumber{\the\month} 月\zhnumber{\the\day}
    日}
3028 \def\CJK@today{\CJK@todaysmall}
3029 \renewcommand\today{\CJK@today}
3030 \newcommand\CJKtoday[1][1]{%
3031     \ifcase#1\def\CJK@today{\CJK@todaysave}
3032     \or\def\CJK@today{\CJK@todaysmall}
3033     \or\def\CJK@today{\CJK@todaybig}
3034     \fi}
3035 \cdate{\ifheu@bachelor\CJK@todaysmall\else\CJK@todaysmall@short\fi}
3036 \ifheu@doctor
3037 \gdef\heu@cxuweishort{博}
3038 \gdef\heu@cxuewei{\heu@cxuweishort 士}
3039 \gdef\heu@cdegree{\heu@cxueke\heu@cxuewei}
3040 \def\heu@cathortitle{\heu@cxuweishort 士研究生}
3041 \fi
3042 \ifheu@master
3043 \gdef\heu@cxuweishort{硕}
3044 \gdef\heu@cxuewei{\heu@cxuweishort 士}
3045 \gdef\heu@cdegree{\heu@cxueke\heu@cxuewei}
3046 \def\heu@cathortitle{\heu@cxuweishort 士研究生}
3047 \fi
3048 \ifheu@bachelor
3049 \gdef\heu@cxuewei{学士}
3050 \fi
3051 \def\heu@stage@opening{开题}
3052 \def\heu@stage@midterm{中期}
3053 \def\heu@stage@doctype{报告}
3054 \def\heu@bachelor@cxuewei{本科生}
3055 \def\heu@bachelor@cthesisname{毕业设计（论文）}
3056 \def\heu@bachelor@cmajortitle{专\hspace{2\ccwd} 业}
3057 \def\heu@bachelor@cstudenttitle{学\hspace{2\ccwd} 生}
3058 \def\heu@bachelor@cstudentidtitle{学\hspace{2\ccwd} 号}
3059 \def\heu@bachelor@cclass{班\hspace{2\ccwd} 号}
3060 \def\heu@bachelor@caffilttitle{学院（系）名称}
3061 \def\heu@bachelor@caffilttitleyt{烟台学院}
3062 \def\heu@bachelor@caffilttitleqd{青岛学院}
3063 \def\heu@bachelor@csupervisortitle{指导教师}
3064 \def\heu@bachelor@cdatetitle{日\hspace{2\ccwd} 期}
3065 \newcommand{\heu@bachelor@teachercomment}{指导教师评语：}
3066 \newcommand{\heu@bachelor@teachersign}{指导教师签字：}
3067 \newcommand{\heu@bachelor@checkdate}{检查日期：}
3068 \def\heu@cthesisitleprefix{题\hspace{\ccwd} 目}
3069 \def\heu@graduate@caffilttitle{院\hspace{3\ccwd}（系）}
3070 \def\heu@graduate@cmajortitle{学\hspace{4\ccwd} 科}
3071 \def\heu@graduate@supervisor{导\hspace{4\ccwd} 师}
3072 \def\heu@graduate@studenttitle{研\hspace{1.5\ccwd} 究\hspace{1.5\ccwd} 生}
3073 \def\heu@graduate@studentid{学\hspace{4\ccwd} 号}
3074 \def\heu@graduate@datetitle{\ifheu@opening\heu@stage@opening

```

```

3075 \else\ifheu@midterm\heu@stage@midterm\fi\fi\heu@stage@doctype 日期}
3076 \def\heu@graduate@enrolldate{\入\hspace{0.666666\ccwd} 学\hspace{0.666666\ccwd}
    时\hspace{0.666666\ccwd} 间}
3077 \def\heu@graduate@thesistitle{论\hspace{0.666666\ccwd} 文\hspace{0.666666\ccwd}
    题\hspace{0.666666\ccwd} 目}
3078 \def\heu@graduate@cafflimajor{学\hspace{0.666666\ccwd} 科\hspace{0.666666\ccwd}
    专\hspace{0.666666\ccwd} 业}
3079 \def\heu@cschoolname{哈尔滨工程大学}
3080 \def\heu@qingdaocampus{(青岛)}
3081 \def\heu@cthesisname{学位论文}
3082 \def\heu@yantaicampus{(烟台)}
3083 \def\heu@cthesis midtermcheck{\heu@cxuweishort\hspace{.125\ccwd} 士\hspace{.125\ccwd}
    学\hspace{.125\ccwd} 位\hspace{.125\ccwd} 论\hspace{.125\ccwd} 文\hspace{.125\ccwd}
    中\hspace{.125\ccwd} 期\hspace{.125\ccwd} 检\hspace{.125\ccwd} 查\hspace{.125\ccwd}
    报\hspace{.125\ccwd} 告}
3084 \def\heu@cschoolnametitle{学位授予单位}
3085 \def\heu@csubmitdatatitle{论文提交日期}
3086 \def\heu@coralexdatetitle{论文答辩日期}
3087 \def\heu@caffilttitle{所在单位}
3088 \def\heu@csubjecttitle{学科、专业}
3089 \def\heu@cdegreetitle{申请学位}
3090 \def\heu@csupervisortitle{指导教师}
3091 \def\heu@cassosupervisortitle{副导师}
3092 \def\heu@ccosupervisortitle{联合导师}
3093 \def\heu@creviewertitle{学位论文主审人}
3094 \def\heu@title@csep{: }
3095 \def\heu@natclassifiedindextitle{分类号}
3096 \def\heu@internatclassifiedindextitle{UDC}
3097 \def\heu@secretlevel{密级}
3098 \def\heu@cnumbertitle{编号}
3099 \newcommand{\heu@author sig}{作者签名: }
3100 \newcommand{\heu@teacher sig}{导师签名: }
3101 \newcommand{\heu@frontdate}{日期: }
3102 \newcommand{\heu@authorizationtitle}{学位论文使用权限}
3103 \newcommand{\heu@qingdao@schoolbottommark}{
3104     \begin{center}
3105         \songti\sanhao\textbf{哈工程(青岛)制}
3106     \end{center}
3107 }
3108 \newcommand{\heu@yantai@schoolbottommark}{
3109     \begin{center}
3110         \songti\sanhao\textbf{哈工程(烟台)制}
3111     \end{center}
3112 }
3113 \newcommand{\heu@harbin@schoolbottommark}{
3114     \begin{center}
3115         \songti\sanhao\textbf{研究生院制}
3116     \end{center}
3117 }
3118 \newcommand{\heu@harbin@bachelor@schoolbottommark}{

```



```

3119 \begin{center}
3120 \songti\xiaoer\textbf{哈尔滨工程大学本科生院制}
3121 \end{center}
3122 }
3123 \newcommand{\heu@doctor@midterm@note}{
3124 \thispagestyle{empty}
3125 {\begin{center}
3126 \songti\sanhao\textbf{说\hspace{4\ccwd} 明}
3127 \end{center}
3128 }
3129 \vspace{1cm}\songti\sihao[2]
3130 \begin{enumerate}[itemsep=-4bp]
3131 \item 博士研究生学位论文中期报告一般在入学后的第五学期末完成。
3132 \item 此报告由学生本人填写，请导师签字后提交一份给检查小组。答辩结束后由检查组长签署意见。
3133 \item 报告经中期报告检查组长签字同意后，由学科部保存，以备论文答辩时参考。研究生院学生培养
        处将对研究生的学位论文中期报告进行抽查。
3134 \item 报告统一用 A4 纸打印。
3135 \end{enumerate}
3136 }
3137 \newcommand{\heu@datefill}{\hspace{2.5em} 年\hspace{1.5em} 月\hspace{1.5em} 日}
3138 \def\heu@motto{大工至善，大学至臻}
3139 \def\heuthesis{\textsc{heu}\-\textsc{Thesis}}
3140 \def\heu{哈尔滨工程大学}
3141 \artcf{g}

```

4.5.7 浮动对象以及表格

设置浮动对象和文字之间的距离，由于规范中没有明确规定，根据经验，设置成正文汉字高度。

```

3142 <*bookcls>
3143 \ifheu@postdoc
3144 \setlength{\intextsep}{10.5bp}
3145 \setlength{\textfloatsep}{10.5bp}
3146 \setlength{\floatsep}{10.5bp}
3147 \else
3148 \setlength{\intextsep}{\ifheu@glue 8.50398bp \@plus 2.83465bp \@minus 0bp\else 8.50398bp}
3149 \setlength{\textfloatsep}{\ifheu@glue 8.50398bp \@plus 2.83465bp \@minus 0bp\else 8.50398bp}
3150 \setlength{\floatsep}{\ifheu@glue 12bp \@plus 2.83465bp \@minus 0bp\else 12bp\fi}
3151 \fi

```

此处设置 float 在 p 选项时间隔，此处不设置 \@fptop 和 \@fpbot 以确保居中。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。

```

3152 \g@addto@macro\appendix{\renewcommand*{\thefigure}{\thechapter.\arabic{figure}}}
3153 \g@addto@macro\appendix{\renewcommand*{\thetable}{\thechapter.\arabic{table}}}
3154 \g@addto@macro\appendix{\renewcommand*{\theequation}{\thechapter.\arabic{equation}}}
3155 \renewcommand{\textfraction}{0.15}
3156 \renewcommand{\topfraction}{0.85}

```

```

3157 \renewcommand{\bottomfraction}{0.65}
3158 \renewcommand{\floatpagefraction}{0.60}

```

\@makecaption 根据我校规范，本科和硕博的图题序号之后的空格不一样。《哈尔滨工程大学研究生学位论文撰写规范》2.13.1 中规定：“每个图均应有图题（由图序和图名组成），图题不宜有标点符号，图名在图序之后空 1 个半角字符排写。”《哈尔滨工程大学本科毕业论文撰写规范》2.13.1 中规定：“每个图均应有图题（由图序和图名组成），图题不宜有标点符号，图名在图序之后空 1 个字符排写。”我校规范中没有明确规定是否标题是否居中对齐，这里给出一个居中选项自行调整。注意，我校只规定：“居中书写”。此处不额外添加悬挂处理。

```

3159 \long\def\@makecaption#1#2{%
3160   \vskip\abovecaptionskip
3161   \wuhao\sbox\@tempboxa{#1\ifheu@bachelor\hskip\ccwd\else\enskip\fi#2}%
3162   \ifdim \wd\@tempboxa >\hsize
3163     \ifheu@capcenterlast%
3164       \vskip 6.3bp%
3165       {\setbox0=\vbox{#1\ifheu@bachelor\hskip\ccwd\else\enskip\fi#2}
3166        \setbox1=\vbox{%
3167          \unvbox0
3168          \setbox2=\lastbox
3169          \hbox to \textwidth{\hfill\unhcopy2 \unskip\unskip\hfill}}
3170        }
3171       \unvbox1}
3172   \else%
3173     #1\ifheu@bachelor\hskip\ccwd\else\enskip\fi#2%
3174   \fi%
3175   \par
3176 \else
3177   \global \@minipagefalse
3178   \hb@xt@\hsize{\hfil\box\@tempboxa\hfil}%
3179 \fi
3180 \vskip\belowcaptionskip}

```

\LT@makecaption 有关 longtable 的 caption 支持

```

3181 \long\def\LT@makecaption#1#2#3{%
3182   \LT@mcol\LT@cols c{\hbox to\z@{\hss\parbox[t]{LTcapwidth{%
3183     \wuhao\sbox\@tempboxa{#1{#2\ifheu@bachelor\hskip\ccwd\else\enskip\fi }#3}%
3184     \ifdim\wd\@tempboxa>\hsize
3185       \ifheu@capcenterlast%
3186         \vskip 6.3bp%
3187         {\setbox0=\vbox{#1{#2\ifheu@bachelor\hskip\ccwd\else\enskip\fi }#3}
3188          \setbox1=\vbox{%
3189            \unvbox0
3190            \setbox2=\lastbox
3191            \hbox to \textwidth{\hfill\unhcopy2 \unskip\unskip\hfill}}
3192          }
3193          \unvbox1}
3194       \else%
3195         #1{#2\ifheu@bachelor\hskip\ccwd\else\enskip\fi }#3%
3196       \fi%

```

```

3197      \par
3198      \else
3199          \global \@minipagefalse
3200          \hbox to\hsize{\hfil\box\@tempboxa\hfil}
3201      \fi
3202      \endgraf\vskip\belowcaptionskip}%
3203      \hss}}}
```

\longbionenumcaption 长表格的双语标题是一个坑。因为第一不能用浮动格式，只能用 `longtable` 包中的 `tabular`，这样表题只能使用表格中前两行来写。这样出现了一个问题是，中英表题的间距，标题和表第一行间距，表格内部间距等多个变量的协调问题。这个问题只要使用 `tabular` 的形式，就是无解的。唯一的方法就是把这些参数都给用户列出来。以下，第 2，5 参数为中英双语标题内容，1，4 为标题参数。6 为中英标题间距，7 为表题和表格间距。

```

3204 \renewcommand*{\longbionenumcaption}[7]{%
3205 \if@contemptyarg{#1}{\caption{#2}}{\caption[#1]{#2}}}%
3206 \global\let\@cont@oldtablename\tablename
3207 \gdef\tablename{#3}
3208 \global\let\LT@c@ption\@cont@LT@nonumintoc
3209 \[\#6]
3210 \if@contemptyarg{#4}{\caption{#5}}{\caption[#4]{#5}}}%
3211 \global\let\tablename\@cont@oldtablename
3212 \global\let\LT@c@ption\@cont@oldLT@c@ption
3213 \vspace{#7}}
```

\ltfontsize 我们采用 `longtable` 来处理跨页的表格。同样我们需要设置其默认字体为五号，行距设置为 1.3 倍行距。此处还需要提供一个设置长表格内部字体的命令。

```

3214 \let\heu@LT@array\LT@array
3215 \def\LT@array{\wuhao\heu@LT@array} % set default font size
3216 \newcommand{\ltfontsize}[1]{\def\LT@array{#1\heu@LT@array}}
```

图表名称及格式。

```

3217 \renewcommand{\thesubtable}{(\alph{subtable})}
3218 \renewcommand{\thefigure}{\arabic{chapter}.\arabic{figure}}% 使图编号为 7.1 的
    格式 %\protect{~}
3219 \renewcommand{\thesubfigure}{(\alph{subfigure})}% 使子图编号为 (a) 的格式
3220 \renewcommand{\p@subfigure}{\thefigure~}% 使子图引用为 7.1(a) 的格式，母图编号和
    子图编号之间用 ~ 加一个空格
3221 \renewcommand{\thetable}{\arabic{chapter}.\arabic{table}}% 使表编号为 7.1 的格
    式
```

调整罗列环境、浮动格式、间距。

```

3222 \setitemize{leftmargin=0em,itemsep=0em,partopsep=0em,parsep=0em,topsep=0em,itemindent=3em}
3223 \setenumerate{leftmargin=0em,itemsep=0em,partopsep=0em,parsep=0em,topsep=0em,itemindent=3em}
3224 \newcommand{\citeup}[1]{\textsuperscript{\cite{#1}}}%
3225 \captionnamefont{\wuhao}
3226 \captiontitlefont{\wuhao}
3227 \renewcommand{\subcapsize}{\wuhao}
3228 \setlength{\abovecaptionskip}{0pt}% 为了双标题之间的间距，不能设置
3229 \setlength{\belowcaptionskip}{0pt}
3230 % 自定义项目列表标签及格式 \begin{publist} 列表项 \end{publist}
```

```

3231 \newcounter{pubctr} % 自定义新计数器
3232 \newenvironment{publist}{%% 定义新环境
3233 \begin{list}{[\arabic{pubctr}]} %% 标签格式
3234     {
3235         \usecounter{pubctr}
3236         \setlength{\leftmargin}{1.7em} % 左边界 \leftmargin = \itemindent + \labelwidth +
3237         \setlength{\itemindent}{0em} % 标号缩进量
3238         \setlength{\labelsep}{0.5em} % 标号和列表项之间的距离, 默认 0.5em
3239         \setlength{\rightmargin}{0em} % 右边界
3240         \setlength{\topsep}{0ex} % 列表到上下文的垂直距离
3241         \setlength{\parsep}{0ex} % 段落间距
3242         \setlength{\itemsep}{0ex} % 标签间距
3243         \setlength{\listparindent}{0pt} % 段落缩进量
3244     }
3245 \end{list}}

```

设置定理定义格式

```

3246 \renewtheoremstyle{plain}
3247 {\item[\hskip\labelsep \theorem@headerfont ##1\ ##2\theorem@separator]}
3248 {\item[\hskip\labelsep \theorem@headerfont ##1\ ##2\ ##3\theorem@separator]}
3249 \theorembodyfont{\songti\rmfamily}
3250 \theoremheaderfont{\heiti\rmfamily}
3251 \theoremsymbol{$\square$}
3252 \setlength{\theorempreskipamount}{0pt}
3253 \setlength{\theorempostskipamount}{-2pt}
3254 \setlength{\parindent}{2em}
3255 \arraycolsep=1.6pt
3256 </bookcls>

```

4.5.8 章节标题

```

3257 <*bookcfg>
3258 \ifheu@english
3259 \ctexset{%
3260     chapter/name={Chapter\enskip},
3261     appendixname={Appendix},
3262     contentsname={Contents},
3263     listfigurename={List of Figures},
3264     listtablename={List of Tables},
3265     figurename={Figure},
3266     tablename={Table},
3267     bibname={References},
3268 }
3269 \else
3270 \ctexset{%
3271     chapter/name={第, 章},
3272     appendixname= 附录,
3273     contentsname={目\hspace{\ccwd} 录},
3274     listfigurename= 插图索引,
3275     listtablename= 表格索引,
3276     figurename= 图,

```

```

3277  tablename= 表,
3278  bibname= 参考文献,
3279  indexname= 索引,
3280 }
3281 \fi
3282 \ifheu@postdoc
3283 \ctexset{
3284   contentsname={目录},
3285 }
3286 \fi

```

添加 Article 和 English 版本以及 postdoc 版本标题名称设置

```

3287 \ifheu@english
3288 \newcommand\equationname{Equation}
3289 \else
3290 \newcommand\equationname{公式}
3291 \fi
3292 \newcommand\listfigurename{Index of figure}
3293 \newcommand\listtablename{Index of table}
3294 \newcommand\listequationname{Index of equation}
3295 \newcommand\listequationname{公式索引}

```

设置英文版公式名称

```

3296 \newcommand{\cabstractname}{Abstract (In Chinese)}

```

此处删除冗余选项

```

3297 \newcommand{\eabstractname}{Abstract}
3298 \newcommand{\eabstractname}{Abstract (In English)}
3299 \newcommand{\cabstractname}{摘要}
3300

```

添加博后摘要

```

3301 \newcommand{\heu@ckeywords@title}{关键词: }
3302 \def\heu@ckeywords@separator{; }
3303 \def\heu@ekeywords@separator{, }
3304 \let\CJK@todaysave=\today
3305 \def\CJK@todaysmall@short{\the\year 年 \the\month 月}
3306 \def\CJK@todaysmall{\the\year 年 \the\month 月 \the\day 日}
3307 \def\CJK@todaybig@short{\zhdigits{\the\year} 年\zhnumber{\the\month} 月}
3308 \def\CJK@todaybig{\zhdigits{\the\year} 年\zhnumber{\the\month} 月\zhnumber{\the\day}
    日}
3309 \def\CJK@today{\CJK@todaysmall}
3310 \renewcommand\today{\CJK@today}
3311 \newcommand\CJKtoday[1][1]{%
3312   \ifcase#1\def\CJK@today{\CJK@todaysave}
3313   \or\def\CJK@today{\CJK@todaysmall}
3314   \or\def\CJK@today{\CJK@todaybig}
3315   \fi}

```

按照 word 示范要求, 此处使用阿拉伯数字

```

3316 \cdate{\ifheu@bachelor\CJK@todaysmall\else\CJK@todaysmall@short\fi}
3317 \edate{\ifcase \month \or January\or February\or March\or April\or May%
3318         \or June\or July \or August\or September\or October\or November

```

```

3319 \or December\fi\unskip,\ \ \the\year}
3320 </bookcfg>

```

按照我校要求, 页面中标题之下不少于一行。

```

3321 <*bookcls>
3322 \def\heu@title@font{%
3323 \ifheu@arialtitle\sffamily\else\heiti\fi}
3324 \newcommand\heu@chapter@titleformat[1]{% 开启悬挂缩进选项
3325 \ifheu@english
3326 \MakeUppercase{#1}
3327 \else
3328 \ifthenelse%
3329 {\equal{#1}{\eabstractcname}}%
3330 {\bfseries #1}%
3331 % 实现章标题的居中加悬挂缩进,注意,此处一定是\CTEX@chaptername\CTEX@chapter@aftername, 否
    则是英文标题长度
3332 {\ifheu@chapterhang\settowidth{\hangindent}{\CTEX@chaptername\CTEX@chapter@aftername}
3333 \fi
3334 }

```

添加英文版目录 **chapter title** 控制

```

3335 \newcommand\heu@chapter@engformat[1]{% 开启悬挂缩进选项
3336 \begin{center}
3337 \heu@title@font
3338 \if@mainmatter
3339 \xiaoer[1.57481]
3340 \else
3341 \sanhao[1.57481]
3342 \fi\bfseries
3343 #1
3344 \end{center}}
3345 \newcommand\heu@chapter@engnameformat[1]{% 开启悬挂缩进选项
3346 \begin{center}
3347 \MakeUppercase{#1}
3348 \end{center}}
3349 \newcommand\heu@chapter@postdocformat[1]{\centering\heu@title@font\xiaoer[1.57481]\text

```

添加博后标题格式

```

3350 \renewcommand\@afterheading{%
3351 \@nobreaktrue
3352 \everypar{%
3353 \if@nobreak
3354 \@nobreakfalse
3355 \clubpenalty 1
3356 \if@afterindent \else
3357 {\setbox\z@\lastbox}%
3358 \fi
3359 \else
3360 \clubpenalty 1
3361 \everypar{}%
3362 \fi}}

```

设置一到四级标题、目录、书签格式。

按照规范中规定行距的 mm 数定义各级行距

```

3363 \ifheu@english
3364   \ctexset{%
3365     chapter={
3366       afterindent=true,
3367       pagestyle={heu@headings},
3368       beforeskip={28.34646bp},% 一个空行 1.57481 × 18
3369       afterskip={28.74646bp},%0.8 应该不计算间距 0.8 × 18 + 0.57481×18
3370       aftername={\par},
3371       format={\heu@chapter@engformat},
3372       nameformat={\heu@chapter@engnameformat},%\center 会影响之后全局
3373       numberformat=\relax,
3374       titleformat={\heu@chapter@titleformat},
3375       fixskip=true, % 添加这一行去除默认间距
3376       %hang=true,
3377     },
3378     section={
3379       afterindent=true,
3380       beforeskip={\ifheu@glue 19.84252bp \@plus 2.834646bp \@minus 0bp \else 19.84252bp
上下空 0.5 行
3381       afterskip={\ifheu@glue 19.84252bp \@plus 2.834646bp \@minus 0bp \else 19.84252bp
3382       format={\heu@title@font\ifheu@glue\fontsize{15bp}{21bp \@plus 1.677267bp \@minus
3383       aftername=\enspace,
3384       fixskip=true,
3385       break={}},
3386     },
3387     subsection={
3388       afterindent=true,
3389       beforeskip={\ifheu@glue 17.00787bp \@plus 2.834646bp \@minus 0bp \else 17.00787bp
3390       afterskip={\ifheu@glue 17.00787bp \@plus 2.834646bp \@minus 0bp \else 17.00787bp
3391       format={\heu@title@font\ifheu@glue\fontsize{14bp}{18bp \@plus 1.842609bp \@minus
3392       aftername=\enspace,
3393       fixskip=true,
3394       break={}},
3395     },
3396     subsubsection={
3397       afterindent=true,
3398       beforeskip={\ifheu@glue 8.503937bp \@plus 2.834646bp \@minus 0bp \else 8.503937bp
3399       afterskip={\ifheu@glue 8.503937bp \@plus 2.834646bp \@minus 0bp \else 8.503937bp
3400       format={\heu@title@font\normalsize},
3401       aftername=\enspace,
3402       fixskip=true,
3403       break={}},
3404     },
3405     paragraph/afterindent=true,
3406     subparagraph/afterindent=true
3407   }
3408 \else

```

```

3409 \ifheu@postdoc
3410   \ctexset{%
3411     chapter={
3412       afterindent=true,
3413       pagestyle={heu@headings},
3414       beforeskip={28.34646bp},% 一个空行 1.57481 × 18
3415       afterskip={28.74646bp},%0.8 应该不计算间距 0.8 × 18 + 0.57481×18
3416       aftername=\enspace,
3417       format={\heu@chapter@postdocformat},%\center 会影响之后全局
3418       nameformat=\relax,
3419       numberformat=\relax,
3420       titleformat=\heu@chapter@titleformat,
3421       fixskip=true, % 添加这一行去除默认间距
3422       %hang=true,
3423     },
3424     section={
3425       afterindent=true,
3426       beforeskip={\ifheu@glue 19.84252bp \@plus 2.834646bp \@minus 0bp \else 19.84252bp
上下空 0.5 行
3427       afterskip={\ifheu@glue 19.84252bp \@plus 2.834646bp \@minus 0bp \else 19.84252bp
3428       format={\heu@title@font\ifheu@glue\fontsize{15bp}{21bp \@plus 1.677267bp \@minus
3429       aftername=\enspace,
3430       fixskip=true,
3431       break={}},
3432     },
3433     subsection={
3434       afterindent=true,
3435       beforeskip={\ifheu@glue 17.00787bp \@plus 2.834646bp \@minus 0bp \else 17.00787bp
3436       afterskip={\ifheu@glue 17.00787bp \@plus 2.834646bp \@minus 0bp \else 17.00787bp
3437       format={\heu@title@font\ifheu@glue\fontsize{14bp}{18bp \@plus 1.842609bp \@minus
3438       aftername=\enspace,
3439       fixskip=true,
3440       break={}},
3441     },
3442     subsubsection={
3443       afterindent=true,
3444       beforeskip={\ifheu@glue 8.503937bp \@plus 2.834646bp \@minus 0bp \else 8.503937bp
3445       afterskip={\ifheu@glue 8.503937bp \@plus 2.834646bp \@minus 0bp \else 8.503937bp
3446       format={\heu@title@font\normalsize},
3447       aftername=\enspace,
3448       fixskip=true,
3449       break={}},
3450     },
3451     paragraph/afterindent=true,
3452     subparagraph/afterindent=true
3453   }
3454 \else
3455   \ctexset{%
3456     chapter={
3457       afterindent=true,

```



```

3458     pagestyle={heu@headings},
3459     beforeskip={28.34646bp},% 一个空行 1.57481 × 18
3460     afterskip={28.74646bp},%0.8 应该不计算间距 0.8 × 18 + 0.57481×18
3461     aftername=\enspace,
3462     format={\centering\heu@title@font\xiaoer[1.57481]},%\center 会影响之后全
    局
3463     nameformat=\relax,
3464     numberformat=\relax,
3465     titleformat=\heu@chapter@titleformat,
3466     fixskip=true, % 添加这一行去除默认间距
3467     %hang=true,
3468 },
3469 section={
3470     afterindent=true,
3471     beforeskip={\ifheu@glue 19.84252bp \@plus 2.834646bp \@minus 0bp \else 19.84252bp
    上下空 0.5 行
3472     afterskip={\ifheu@glue 19.84252bp \@plus 2.834646bp \@minus 0bp \else 19.84252bp
3473     format={\heu@title@font\ifheu@glue\fontsize{15bp}{21bp \@plus 1.677267bp \@minus
3474     aftername=\enspace,
3475     fixskip=true,
3476     break={}},
3477 },
3478 subsection={
3479     afterindent=true,
3480     beforeskip={\ifheu@glue 17.00787bp \@plus 2.834646bp \@minus 0bp \else 17.00787bp
3481     afterskip={\ifheu@glue 17.00787bp \@plus 2.834646bp \@minus 0bp \else 17.00787bp
3482     format={\heu@title@font\ifheu@glue\fontsize{14bp}{18bp \@plus 1.842609bp \@minus
3483     aftername=\enspace,
3484     fixskip=true,
3485     break={}},
3486 },
3487 subsubsection={
3488     afterindent=true,
3489     beforeskip={\ifheu@glue 8.503937bp \@plus 2.834646bp \@minus 0bp \else 8.503937bp
3490     afterskip={\ifheu@glue 8.503937bp \@plus 2.834646bp \@minus 0bp \else 8.503937bp
3491     format={\heu@title@font\normalsize},
3492     aftername=\enspace,
3493     fixskip=true,
3494     break={}},
3495 },
3496 paragraph/afterindent=true,
3497 subparagraph/afterindent=true
3498 }
3499 \fi
3500 \fi

```

此处添加英文版和博后的 title 设置设置附表、附录格式。

```

3501 \ifheu@english
3502 \NewDocumentCommand{\heu@appendix@chapter}{s o m o}{%
3503     \IfBooleanT{#1}%

```

```

3504 {
3505     \phantomsection
3506     \IfValueTF{#2}{
3507         \markboth{#2}{#2}
3508     }{
3509         \markboth{#3}{#3}
3510     }
3511
3512     \ifthenelse%
3513     {\equal{#3}{\cabstracname}}%
3514     {\relax}
3515     {\addcontentsline{toc}{chapter}{\texorpdfstring{\ifheu@arialtitle\sffamily\heiti\el
3516
3517     \IfValueT{#4}{\addcontentsline{toe}{chapter}{\texorpdfstring{\bfseries #4}{#4}}}
3518     \heu@chapter*{#3}
3519 }
3520 }
3521 \else

```

添加英文版附表格式

```

3522 \NewDocumentCommand{\heu@appendix@chapter}{s o m o}{%
3523     \IfBooleanT{#1}%
3524     {
3525         \phantomsection
3526         \IfValueTF{#2}{
3527             \markboth{#2}{#2}
3528         }{
3529             \markboth{#3}{#3}
3530         }
3531         \ifthenelse%
3532         {\equal{#3}{\eabstracname}}%
3533         {\addcontentsline{toc}{chapter}{\texorpdfstring{\ifheu@arialtitle\sffamily\heiti\el
3534         {\addcontentsline{toc}{chapter}{\texorpdfstring{\ifheu@arialtitle\sffamily\heiti\el
3535         \IfValueT{#4}{\addcontentsline{toe}{chapter}{\texorpdfstring{\bfseries #4}{#4}}}
3536         \heu@chapter*{#3}
3537     }
3538 }
3539 \fi
3540 \newcommand{\BiAppChapter}[2]      % 该附录命令适用于有章节的完整附录
3541 {\phantomsection
3542     \chapter{#1}

```

此处添加保护选项添加\textorpdfstring命令去除书签中带有格式时的警告

```

3543 \addcontentsline{toe}{chapter}{\texorpdfstring{\bfseries \xiaosi Appendix \thechapter\
3544 }

```

设置章节命令。**s**: 星号, 表示在目录中出不出现序号。**m**: 必须要有的选项, 中文章节名称也即目录中名称, 页眉中名称, 书签中的名称。**o**: 可选内容, 没有就默认是正文章节, 如果有, 则是英文目录中显示的内容。

\chapter

```

3545 \let\heu@chapter\chapter

```

```

3546 \RenewDocumentCommand{\chapter}{s o m o}{%
3547   \ifheu@openright\cleardoublepage\else\clearpage\fi\phantomsection%
3548   \IfBooleanTF{#1}%
3549   {%      if \chapter*
3550     \IfNoValueTF{#2}%
3551     {\heu@chapter*{#3}}%
3552     {\heu@chapter*[#2]{#3}}%
3553     \IfValueT{#4}{%

```

此处添加保护选项

```

3554       \addcontentsline{toe}{chapter}{\texorpdfstring{\bfseries #4}{#4}}
3555     }
3556   }%
3557   {%      if \chapter
3558     \IfNoValueTF{#2}%
3559     {\heu@chapter{#3}}%
3560     {\heu@chapter[#2]{#3}}%
3561     \IfValueT{#4}{%

```

此处需删除章节的空白此处添加保护选项

```

3562       \addcontentsline{toe}{chapter}{\texorpdfstring{\bfseries\relax Chapter \the
3563     }
3564   }
3565 }

```

\section

```

3566 \let\heu@section\section
3567 \RenewDocumentCommand\section{s o m o}{
3568   \IfBooleanTF{#1}%
3569   {%      if \section*
3570     \IfNoValueTF{#2}%
3571     {\heu@section*{#3}}%
3572     {\heu@section*[#2]{#3}}%
3573     \IfValueT{#4}{%
3574       \addcontentsline{toe}{section}{#4}
3575     }
3576   }%
3577   {%      if \section
3578     \IfNoValueTF{#2}%
3579     {\heu@section{#3}}%
3580     {\heu@section[#2]{#3}}%
3581     \IfValueT{#4}{%

```

此处需删除章节的空白

```

3582       \addcontentsline{toe}{section}{\protect\numberline{\csname thesection\endcsname}\ignorespaces}
3583     }
3584   }
3585 }

```

\subsection

```

3586 \let\heu@subsection\subsection

```

```

3587 \RenewDocumentCommand\subsection{s o m o}{
3588   \IfBooleanTF{#1}%
3589   {%      if \subsection*
3590     \IfNoValueTF{#2}%
3591     {\heu@subsection*{#3}}%
3592     {\heu@subsection*[#2]{#3}}%
3593     \IfValueT{#4}{%
3594       \addcontentsline{toe}{subsection}{#4}
3595     }
3596   }%
3597   {%      if \subsection
3598     \IfNoValueTF{#2}%
3599     {\heu@subsection{#3}}%
3600     {\heu@subsection[#2]{#3}}%
3601     \IfValueT{#4}{%

```

此处需删除章节的空白添加\ignorespaces 选项，矫正英文目录多出一个空白而无法对其的 bug

```

3602     \addcontentsline{toe}{subsection}{\protect\numberline{\csname thesubsection\endcsname}}
3603   }
3604 }
3605 }

```

\subsubsection

```

3606 \let\heu@subsubsection\subsubsection
3607 \RenewDocumentCommand\subsubsection{s o m o}{
3608   \IfBooleanTF{#1}%
3609   {%      if \subsubsection*
3610     \IfNoValueTF{#2}%
3611     {\heu@subsubsection*{#3}}%
3612     {\heu@subsubsection*[#2]{#3}}%
3613     \IfValueT{#4}{%
3614       \addcontentsline{toe}{subsubsection}{#4}
3615     }
3616   }%
3617   {%      if \subsubsection
3618     \IfNoValueTF{#2}%
3619     {\heu@subsubsection{#3}}%
3620     {\heu@subsubsection[#2]{#3}}%
3621     \IfValueT{#4}{%

```

此处需删除章节的空白添加\ignorespaces 选项，矫正英文目录多出一个空白而无法对其的 bug

```

3622     \addcontentsline{toe}{subsubsection}{\protect\numberline{\csname thesubsubsection\endcsname}}
3623   }
3624 }
3625 }

```

4.5.9 定义封面

封面信息。

```

3626 \def\heu@def@term#1{%
3627   \define@key{heu}{#1}{\csname #1\endcsname{##1}}
3628   \expandafter\gdef\csname #1\endcsname##1{%
3629     \expandafter\gdef\csname heu@#1\endcsname{##1}}
3630   \csname #1\endcsname{}}
3631
3632 \heu@def@term{statesecrets} % 密级
3633 \heu@def@term{cnumber} % 编号
3634 \heu@def@term{natclassifiedindex} % 国内图书分类号
3635 \heu@def@term{intclassifiedindex} % 国际图书分类号
3636 \heu@def@term{ctitlecover} % 中文标题封面
3637 \heu@def@term{ctitle} % 中文标题
3638 \heu@def@term{csubtitle} % 中文副标题
3639 \heu@def@term{cxueke} % 中文学科
3640 \heu@def@term{cauthor} % 中文作者
3641 \heu@def@term{csupervisor} % 中文导师
3642 \heu@def@term{cprofessional}% 职称
3643 \heu@def@term{csupervisorcaffil}% 导师单位
3644 \heu@def@term{cassosupervisor} % 中文副导师
3645 \heu@def@term{ccosupervisor}% 中文联合导师
3646 \heu@def@term{creviewer}% 论文主审人
3647 \heu@def@term{caffil}% 中文院系
3648 \heu@def@term{csubject}% 中文专业
3649 \heu@def@term{csubmitdate}% 论文提交日期
3650 \heu@def@term{coralexdate}% 论文答辩日期
3651 \heu@def@term{cdate}% 论文封面日期

```

添加博后封皮选项

```

3652 \heu@def@term{cpositionname}% 博士后工作站名称
3653 \heu@def@term{cfinishdate}% 完成日期
3654 \heu@def@term{cstartdate}% 开始日期
3655 \heu@def@term{cenddate}% 博士后期满时间
3656
3657 \heu@def@term{cstudentid}% 学号
3658 \heu@def@term{cstudenttype}% 学生类型
3659 \heu@def@term{ctitleone}% 第一行标题
3660 \heu@def@term{ctitletwo}% 第二行标题
3661
3662 \heu@def@term{etitle} % 英文标题
3663 \heu@def@term{esubtitle} % 英文标题
3664 \heu@def@term{exueke} % 英文学科
3665 \heu@def@term{eauthor} % 英文作者
3666 \heu@def@term{esupervisor} % 英文导师
3667 \heu@def@term{eassosupervisor} % 英文副导师
3668 \heu@def@term{ecosupervisor} % 英文联合导师
3669 \heu@def@term{eaaffil}% 英文院系
3670 \heu@def@term{esubject}% 英文学科
3671 \heu@def@term{esubmitdate}% 英文论文提交日期
3672 \heu@def@term{eoralexdate}% 英文论文答辩日期
3673 \heu@def@term{edate}% 英文日期

```

```

3674 \heu@def@term{estudenttype}% 英文学生类型
3675
3676 \newcommand{\heu@@cabstract}[1]{\long\gdef\heu@cabstract{#1}}
3677 \newenvironment{cabstract}{\Collect@Body\heu@@cabstract}{}
3678 \newcommand{\heu@@eabstract}[1]{\long\gdef\heu@eabstract{#1}}
3679 \newenvironment{eabstract}{\Collect@Body\heu@@eabstract}{}
3680 \def\heu@parse@keywords#1{
3681   \define@key{heu}{#1}{\csname #1\endcsname{##1}}
3682   \expandafter\gdef\csname heu@#1\endcsname{
3683     \expandafter\gdef\csname #1\endcsname##1{
3684       \@for\reserved@a:=##1\do{
3685         \expandafter\ifx\csname heu@#1\endcsname\@empty\else
3686           \expandafter\g@addto@macro\csname heu@#1\endcsname{%
3687             \ignorespaces\csname heu@#1@separator\endcsname}
3688         \fi
3689         \expandafter\expandafter\expandafter\g@addto@macro%
3690         \expandafter\csname heu@#1\expandafter\endcsname\expandafter{\reserved@a}}}}
3691 \heu@parse@keywords{ckeywords}
3692 \heu@parse@keywords{ekywords}
3693 \def\heu@setup{\kvsetkeys{heu}}
3694 </bookcls>

```

定义封面中用到的词汇。

```

3695 <*bookcfg>
3696 \ifheu@postdoc
3697 \gdef\heu@cxuweishort{博}
3698 \gdef\heu@exuewei{Doctor}
3699 \gdef\heu@exuweier{D.Eng}% 英文学位名称缩写
3700 \gdef\heu@cxuewei{\heu@cxuweishort 士}
3701 \gdef\heu@cdegree{\heu@cxueke\heu@cxuewei}
3702 \gdef\heu@edegree{\heu@exuewei \ of \heu@exueke}
3703 \def\heu@cauthortitle{\heu@cxuweishort 士研究生}
3704 \fi
3705

```

添加博后选项

```

3706
3707 \ifheu@doctor
3708 \gdef\heu@cxuweishort{博}
3709 \gdef\heu@exuewei{Doctor}
3710 \gdef\heu@exuweier{D.Eng}% 英文学位名称缩写
3711 \gdef\heu@cxuewei{\heu@cxuweishort 士}
3712 \gdef\heu@cdegree{\heu@cxueke\heu@cxuewei}
3713 \gdef\heu@edegree{\heu@exuewei \ of \heu@exueke}
3714 \def\heu@cauthortitle{\heu@cxuweishort 士研究生}
3715 \fi
3716
3717 \ifheu@master
3718 \gdef\heu@cxuweishort{硕}
3719 \gdef\heu@exuewei{Master}
3720 \gdef\heu@exuweier{M.Eng}% 英文学位名称缩写

```

```

3721 \gdef\heu@cxuewei{\heu@cxuweishort 士}
3722 \gdef\heu@cdegree{\heu@cxueke\heu@cxuewei}
3723 \gdef\heu@edegree{\heu@exuewei \ of \heu@exueke}
3724 \def\heu@cauthor\title{\heu@cxuweishort 士研究生}
3725 \fi
3726
3727 \ifheu@bachelor
3728 \gdef\heu@cxuewei{学士}
3729 \fi
3730
3731 \def\heu@postdoc@classifiedindex{分类号}
3732 \def\heu@postdoc@secretlevel{密级}
3733 \def\heu@postdoc@number{编号}
3734 \def\heu@postdoc@UDC{U\hspace{0.4\ccwd}D\hspace{0.4\ccwd}C: }
3735 \def\heu@stage@opening{开题}
3736 \def\heu@stage@midterm{中期}
3737 \def\heu@stage@doctype{报告}
3738

```

调整博后封皮中字间距

```

3739 \def\heu@postdoc@documenttitle{博\hspace{0.58\ccwd} 士\hspace{0.58\ccwd} 后\hspace{0.58\ccwd} 研\hspace{0.58\ccwd} 究\hspace{0.58\ccwd} 工\hspace{0.58\ccwd} 作\hspace{0.58\ccwd} 报\hspace{0.58\ccwd} 告}
3740 \def\heu@postdoc@documenttitlenospace{博士后研究工作报告}
3741 \def\heu@postdoc@finishdate{工作完成日期}
3742 \def\heu@postdoc@submitdate{报告提交日期}
3743 \def\heu@postdoc@authorname{博士后姓名}
3744 \def\heu@postdoc@supervisor{合作导师}
3745 \def\heu@postdoc@positionname{流动站名称}
3746 \def\heu@postdoc@major{专业名称}
3747 \def\heu@postdoc@startdate{研究工作起始时间}
3748 \def\heu@postdoc@enddate{研究工作期满时间}
3749 \def\heu@postdoc@separator{: }

```

添加本科开题封皮中 title 定义

```

3750 \def\heu@bachelor@cxuewei{本科生}
3751 \def\heu@bachelor@cthesisname{毕业论文}
3752 \def\heu@bachelor@cstudenttitle{学生姓名}
3753 \def\heu@bachelor@cstudentidtitle{学\hspace{2\ccwd} 号}
3754 \def\heu@bachelor@secretlevel{密\hspace{2\ccwd} 级}
3755 \def\heu@bachelor@ccolegetitle{所在学院}
3756 \def\heu@bachelor@cmajortitlecov{专业名称}
3757 \def\heu@bachelor@cmajortitlesec{所在专业}
3758 \def\heu@bachelor@csupervisortitle{指导教师}
3759 \def\heu@bachelor@cprofessionaltitle{职称}
3760 \def\heu@bachelor@cthesis\title{题目}
3761 \def\heu@bachelor@cdate\title{日\hspace{2\ccwd} 期}
3762 \def\heu@bachelor@caffilt\title{学院（系）名称}
3763 \def\heu@bachelor@cupervisoraffilt\title{所在单位}
3764 \def\heu@bachelor@caffilt\titleqd{青岛学院}
3765 \def\heu@bachelor@caffilt\titleya{烟台学院}

```

3766 </bookcfg>

此处添加青岛校区设置

3767 <*bookcfg>

3768 \newcommand{\heu@bachelor@teachercomment}{指导教师评语: }

3769 \newcommand{\heu@bachelor@teachersign}{指导教师签字: }

3770 \newcommand{\heu@bachelor@checkdate}{检查日期: }

3771

3772 \def\heu@cthesisprefix{题\hspace{\ccwd} 目}

3773 \def\heu@cthesisname{学位论文}

3774 \def\heu@cschoolname{哈尔滨工程大学}

3775 </bookcfg>

此处添加校区设置

3776 <*bookcfg>

3777 \def\heu@qingdaocampus{(青岛)}

3778 \def\heu@yantaicampus{(烟台)}

3779 \def\heu@harbincampus{(哈尔滨)}

3780

3781 \def\heu@cschoolnametitle{学位授予单位}

3782 \def\heu@csubmitdatatitle{论文提交日期}

3783 \def\heu@coralexdatetitle{论文答辩日期}

3784 \def\heu@caffilttitle{所在单位}

3785 \def\heu@ccolegetitle{所在学院}

3786 \def\heu@csubjecttitle{学科、专业}

3787 \def\heu@cprodrreetitle{学位类别}

3788 \def\heu@cprosubjecttile{专业类别}

3789 \def\heu@cdegreetitle{申请学位}

3790 \def\heu@csupervisortitle{指导教师}

3791 \def\heu@cassosupervisortitle{副导师}

3792 \def\heu@ccosupervisortitle{校外导师}

3793 \def\heu@creviewertitle{学位论文主审人}

3794 \def\heu@title@csep{: }

3795 \def\heu@eauthortitle{Candidate}

3796 \def\heu@esupervisortitle{Supervisor}

3797 \def\heu@eassosupervisortitle{Associate Supervisor}

3798 \def\heu@ecosupervisortitle{Co Supervisor}

3799 \def\heu@edegreetitle{Academic Degree Applied for}

3800 \def\heu@esubjecttitle{Specialty}

3801 \def\heu@eaffilttitle{College}

3802 \def\heu@ecategorytitle{Professional category}

3803 \def\heu@esubmitdatetitle{Date of Submission}

3804 \def\heu@eoralexdatetitle{Date of Oral Examination}

3805 \def\heu@eschoolnametitle{University}

3806 \def\heu@eschoolname{Harbin Engineering University}

3807 \def\heu@title@esep{: }

3808 \def\heu@natclassifiedindextitle{分类号}

3809 \def\heu@internatclassifiedindextitle{U D C}

3810 \def\heu@secretlevel{密级}

3811 \def\heu@cnumbertitle{编号}

专业学位论文扉页研究类型选项

```

3812 \ifheu@productdevelopment
3813   \def\heu@searcetype{(\wuhao\SquareSolid} 产品设计\hspace{0.5\ccwd}{\wuhao\Square}
      工程规划\hspace{0.5\ccwd}{\wuhao\Square} 工程设计\hspace{0.5\ccwd}{\wuhao\Square}
      应用研究)}
3814 \fi
3815 \ifheu@projectdplanning
3816   \def\heu@searcetype{(\wuhao\Square} 产品设计\hspace{0.5\ccwd}{\wuhao\SquareSolid}
      工程规划\hspace{0.5\ccwd}{\wuhao\Square} 工程设计\hspace{0.5\ccwd}{\wuhao\Square}
      应用研究)}
3817 \fi
3818 \ifheu@projectdesign
3819   \def\heu@searcetype{(\wuhao\Square} 产品设计\hspace{0.5\ccwd}{\wuhao\Square}
      工程规划\hspace{0.5\ccwd}{\wuhao\SquareSolid} 工程设计\hspace{0.5\ccwd}{\wuhao\Square}
      应用研究)}
3820 \fi
3821 \ifheu@applicationresearch
3822   \def\heu@searcetype{(\wuhao\Square} 产品设计\hspace{0.5\ccwd}{\wuhao\Square}
      工程规划\hspace{0.5\ccwd}{\wuhao\Square} 工程设计\hspace{0.5\ccwd}{\wuhao\SquareSolid}
      应用研究)}
3823 \fi
3824
3825 \def\heu@conclusion@ctitle{结论}
3826
3827 \def\heu@conclusion@etitle{Conclusions}
3828 \def\heu@bibname@etitle{References}
3829
3830 \def\heu@appendix@ctitle{附录}
3831 \def\heu@appendix@etitle{Appendix}
3832
3833 \def\heu@acknowledgement@ctitle{致谢}
3834 \def\heu@acknowledgement@etitle{Acknowledgements}
3835
3836 \ifheu@postdoc
3837 \def\heu@resume@ctitle{博士后个人简历}
3838 \else
3839 \def\heu@resume@ctitle{个人简历}
3840 \fi

```

添加博后封皮 title 的选项

```

3841
3842 \def\heu@correspondingaddr@ctitle{永久通讯地址}
3843
3844 \def\heu@resume@etitle{Resume}
3845 \def\heu@authorization@ctitle{学位论文原创性声明}
3846 \def\heu@authorization@etitle{Statement of copyright and Letter of authorization}
3847
3848 \newcommand{\heu@authorsig}{作者（签字）：}
3849 \newcommand{\heu@teachersig}{导师（签字）：}
3850 \newcommand{\heu@frontdate}{日期：}

```

```

3851 \newcommand{\heu@denotation@ctitle}{物理量名称及符号表}
3852 \newcommand{\heu@denotation@etitle}{List of physical quantity and symbol}
3853 \newcommand{\heu@authorizationtitle}{学位论文授权使用声明}
3854
3855 \newcommand{\heu@qingdao@schoolbottommark}{
3856     \begin{center}
3857         \songti\sanhao\textbf{哈工程（青岛）制}
3858     \end{center}
3859     \begin{center}
3860         \songti\sanhao\textbf{二〇二〇年三月}
3861     \end{center}
3862 }
3863 \newcommand{\heu@yantai@schoolbottommark}{
3864     \begin{center}
3865         \songti\sanhao\textbf{哈工程（烟台）制}
3866     \end{center}
3867     \begin{center}
3868         \songti\sanhao\textbf{二〇二〇年三月}
3869     \end{center}
3870 }
3871 \newcommand{\heu@harbin@schoolbottommark}{
3872     \begin{center}
3873         \songti\sanhao\textbf{研究生院制}
3874     \end{center}
3875     \begin{center}
3876         \songti\sanhao\textbf{二〇一四年九月}
3877     \end{center}
3878 }
3879 \newcommand{\heu@harbin@bachelor@schoolbottommark}{
3880     \begin{center}
3881         \songti\xiaoer\textbf{哈尔滨工程大学本科生院制}
3882     \end{center}
3883 }
3884
3885 \newcommand{\heu@doctor@midterm@note}{
3886     \thispagestyle{empty}
3887     \begin{center}
3888         \songti\sanhao\textbf{说\hspace{4\ccwd} 明}
3889     \end{center}
3890 }
3891 \vspace{1cm}\songti\sihao[2]
3892 \begin{enumerate}[itemsep=-4bp]
3893 \item 博士研究生学位论文中期报告一般在入学后的第五学期末完成。
3894 \item 此报告由学生本人填写，请导师签字后提交一份给检查小组。答辩结束后由检查组长签署意见。
3895 \item 报告经中期报告检查组长签字同意后，由学科部保存，以备论文答辩时参考。研究生院学生培养
      处将对研究生的学位论文中期报告进行抽查。
3896 \item 报告统一用 A4 纸打印。
3897 \end{enumerate}
3898 }
3899 % \end{macrocode}

```

```

3900 % \changes{v1.0.5}{2026/03/01}{根据 2026.02.28 哈尔滨工程大学最新要求修改原创型声
      明和授权使用声明}
3901 % \begin{macrocode}
3902 \newcommand{\heu@authorizationtext}{%
3903 {\wuhao 本人完全了解学校保护知识产权的有关规定，即研究生在校攻读学位期间论文工作的知识产权
      属于 \heu@cschoolname 。 \heu@cschoolname 有权保留并向国家有关部门或机构送交论文的复
      印件。本人允许 \heu@cschoolname 将论文的部分或全部内容编入有关数据库进行检索，可采用影印、
      缩印或扫描等复制手段保存和汇编本学位论文，可以公布论文的全部内容。同时本人保证毕业后结合学位
      论文研究课题再撰写的论文一律注明作者第一署名单位为 \heu@cschoolname 。涉密学位论文待解密
      后适用本声明。}
3904
3905 {\wuhao 本论文(\xiaoliu{\Square}) 在授予学位后即可 \hspace{0.1em} {\xiaoliu{\Square}) 在
      授予学位 24 个月(含)后 \hspace{0.1em} {\xiaoliu{\Square}) 全部内容在授予学位 \underline{\hsp
      月后【限填 24 个月以上，须学校审批】\hspace{0.1em} {\xiaoliu{\Square}) 部分内容在授予
      学位 \underline{\hspace{1.5em}} 个月后【须学校审批】\hspace{0.1em} {\xiaoliu{\Square}) 解
      密后)由 \heu@cschoolname 送交有关部门进行保存汇编、公布使用等。}}
3906
3907 \newcommand{\heu@declarename@bachelor}{\heu@cschoolname 本科毕业设计(论文)原创
      性声明}
3908 \newcommand{\heu@authorizationtext@bachelor}{%
3909 {\wuhao 本人郑重声明:在\heu@cschoolname 攻读学士学位期间,所提交的毕业设计(论文)《\heu@ctitle》,
      是本人在导师指导下独立进行研究工作所取得的成果。对本文的研究工作做出重要贡献的个人和集体,均
      已在文中以明确方式注明,其它未注明部分不包含他人已发表或撰写过的研究成果,不存在购买、由他人
      代写、剽窃和伪造数据等作假行为。本人完全意识到本声明的法律结果由本人承担。}}
3910 \newcommand{\heu@declarename}{学位论文原创性声明}
3911 \newcommand{\heu@declaretext}{%
3912 {\wuhao 本人郑重声明:本论文的所有工作,是在导师的指导下,由作者本人独立完成的。有关观点、方
      法、数据和文献的引用已在文中指出,并与参考文献相对应。本论文在撰写过程中,所有由人工智能技术
      辅助生成的内容,作者均已明确标注,并对其真实性、准确性及合规性承担最终责任。论文中所有研究设
      计、数据分析、核心观点、结论及创新性研究成果均为作者独立思考完成,不存在将人工智能技术或工具
      标注为作者或完成人的情况。除文中已注明引用的内容外,本论文不包含任何其他个人或集体已经公开发
      表的作品成果。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。本人完全意识到
      本声明的法律结果由本人承担。}}
3913
3914 \ifheu@english
3915 \newcommand{\heu@publication@ctitle}{Author's Publications}
3916 \else
3917 \ifheu@postdoc
3918 \newcommand{\heu@publication@ctitle}{博士后期间的研究成果}
3919 \else
3920 \newcommand{\heu@publication@ctitle}{攻读\heu@cxuewei 学位期间发表的论文及其他成
      果}
3921 \fi
3922 \fi
3923 \newcommand{\heu@doctorpublication@ctitle}{博士生期间的研究成果}

博后和英文版附录 title
3924
3925 \newcommand{\heu@datefill}{\hspace{3.0em} 年\hspace{1.5em} 月\hspace{1.5em} 日}
3926 \newcommand{\heu@publication@etitle}{Papers published in the period of Ph.D. education}

```

```

3927 \def\heu@index@etitle{Index}
3928 \def\heu@motto{大工至善，大学至臻}
3929 \def\heu@cbraceleft{ ( }
3930 \def\heu@cbraceright{ ) }
3931 \def\heu@ebraceleft{ { }
3932 \def\heu@ebraceright{ } }
3933 </bookcfg>

```

中英文封面。

```

3934 <*bookcls>
3935 \newlength{\heu@title@width}
3936 \newcommand{\heu@put@title}[2][\heu@title@width]{%
3937   \begin{CJKfillltwosides}[b]{#1}#2\end{CJKfillltwosides}}
3938
3939 \def\heu@first@titlepage{%
3940   \ifheu@postdoc\heu@first@titlepage@postdoc\else\ifheu@bachelor\heu@first@titlepage@ba
3941
3942 \def\heu@second@titlepage{%
3943   \ifheu@postdoc\heu@second@titlepage@postdoc\else\ifheu@bachelor\heu@second@titlepage@
3944

```

博后封皮

```

3945 \newcommand{\heu@first@titlepage@postdoc}{
3946   {\songti\sihao\renewcommand{\arraystretch}{2}\
3947     \begin{tabular}{@{}r@{}l@{\hspace{7\ccwd}}r@{}l@{\hspace{3em}}r}
3948       \heu@postdoc@classifiedindex & \underline{\makebox[6\ccwd]{\heu@natclassifiedinde
3949       \heu@postdoc@UDC & \underline{\makebox[6\ccwd]{\heu@intclassifiedinde
3950     \end{tabular}}\renewcommand{\arraystretch}{1}}
3951   \vspace*{0.5cm}
3952   \parbox[t][5cm][b]{\textwidth}{\begin{center}\heiti\xiaoer[2]\heu@cschoolname\par
3953     \heu@postdoc@documenttitle\end{center}}}
3954   \parbox[b][4cm][b]{\textwidth}{
3955     \songti\xiaoer[2]\renewcommand{\arraystretch}{1.5}
3956     \begin{center}
3957       \begin{tabular}{c}
3958         \makebox[9cm]{\heu@ctitleone}\\
3959         \hline
3960         \makebox[9cm]{\heu@ctitletwo}\\
3961         \hline
3962       \end{tabular}\renewcommand{\arraystretch}{1}
3963     \end{center}}
3964     \begin{center}
3965       \songti\sihao[2]\centering\heu@cauthor
3966     \end{center}
3967   \parbox[b][4.5cm][b]{\textwidth}{
3968     \songti\sihao[2]\renewcommand{\arraystretch}{1.5}
3969     \begin{center}
3970       \begin{tabular}{rl}
3971         \heu@postdoc@finishdate & \underline{\makebox[6cm]{\heu@cfinishdate}} \\
3972         \heu@postdoc@submitdate & \underline{\makebox[6cm]{\heu@csubmitdate\hfill}} \\
3973       \end{tabular}\renewcommand{\arraystretch}{1}

```

```

3974 \end{center}
3975 }
3976 \vfill
3977 {\songti\sihao[2]
3978 \begin{center}
3979 \he@cschoolname%
3980 %\ifheu@harbin
3981 %\heu@harbincampus
3982 %\fi
3983 \ifheu@yantai
3984 \heu@yantaicampus
3985 \fi
3986 \ifheu@qingdao
3987 \heu@qingdaocampus
3988 \fi
3989 \end{center}
3990 \begin{center}
3991 \heu@cdate
3992 \end{center}}
3993 }
3994

```

搏后封二

```

3995 \newcommand{\heu@second@titlepage@postdoc}{
3996 \ifthenelse%
3997 {\equal{\heu@fontset}{siyuan}}%
3998 {\xiaosi[1]\vspace*{0.65em}}%
3999 {\xiaosi[1]\textcolor{rgb}{1,1,1}{\songti{\heu@motto}}}%
4000 \vspace*{1.2cm}
4001 \begin{center}
4002 \parbox[t][8cm][t]{\textwidth}{
4003 \begin{center}\songti\sanhao[2]\heu@ctitlecover\end{center}
4004 \vspace*{16bp}
4005 \begin{center}\sihao[2]\MakeUppercase{\heu@etitle}\end{center}
4006 }
4007 \parbox[t][5cm][t]{\textwidth}{
4008 \begin{center}\songti\sihao[2]
4009 \begin{tabularx}{0.6\linewidth}{l@{\heu@postdoc@separator}l}
4010 \makebox[9em][s]{\heu@postdoc@authorname} & \heu@cauthor \\
4011 \makebox[9em][s]{\heu@postdoc@supervisor} & \heu@csupervisor \\
4012 \makebox[9em][s]{\heu@postdoc@positionname} & \heu@cpositionname \\
4013 \makebox[9em][s]{\heu@postdoc@major} & \heu@csubject \\
4014 \makebox[9em][s]{\heu@postdoc@startdate} & \heu@cstartdate \\
4015 \makebox[9em][s]{\heu@postdoc@enddate} & \heu@cenddate \\
4016 \end{tabularx}
4017 \end{center}
4018 }
4019 \end{center}
4020 \vfill
4021 {\songti\sihao[2]

```

```

4022 \begin{center}
4023 \heucschoollname%
4024 %\ifheu@harbin
4025 %\heu@harbincampus
4026 %\fi
4027 \ifheu@yantai
4028 \heu@yantaicampus
4029 \fi
4030 \ifheu@qingdao
4031 \heu@qingdaocampus
4032 \fi
4033 \end{center}
4034 \begin{center}
4035 \heu@cdate
4036 \end{center}}
4037

```

本科论文封面

```

4038 \newcommand{\heu@first@titlepage@bachelor}{
4039 \ifthenelse%
4040 {\equal{\heu@fontset}{siyuan}}%
4041 {\xiaosi[1]\textcolor{rgb}{1,1,1}{\songti{\heu@motto}}}%
4042 \vspace*{0.1cm}
4043 \begin{center}
4044 {\songti\xiaosi
4045 \begin{tabular}{@{\qquad}\qquad}@{}r@{}l@{}l@{\qquad}}
4046 & & \\\
4047 & & \\
4048 \end{tabular}}\hfill
4049 {\songti\xiaosi
4050 \begin{tabular}{@{}r@{:}l@{}l@{\qquad}}
4051 \heu@bachelor@cstudentidtitle & \underline{\makebox[2.5cm]{\heu@cstudentid}} & \\\
4052 \heu@bachelor@secretlevel & \underline{\makebox[2.5cm]{\heu@statesecrets}} & \\
4053 \end{tabular}}
4054 \parbox[t][2.0cm][t]{\textwidth}\begin{center} \end{center} }
4055 \parbox[t][1.2cm][t]{\textwidth}{
4056 \begin{center}\xiaoer[1]\songti{\heu@cschoollname\heu@bachelor@cxuwei\heu@bachelor@
4057 \parbox[t][1.2cm][t]{\textwidth}}
4058 \parbox[t][7.8cm][t]{\textwidth}{%
4059 \begin{center}\erhao\heiti\heu@ctitlecover\end{center}
4060 \ifheu@subtitle\begin{center}\hspace{-4em}\xiaoer\heiti\pozhehao\heu@csubtitle\end{
4061 \parbox[t][7.4cm][t]{\textwidth}{
4062 {\xiaosan
4063 \setlength{\heu@title@width}{7em}
4064 \begin{center} \renewcommand{\arraystretch}{1.62} \songti
4065 \begin{tabular}{l@{\heu@title@csep}l}
4066 {\songti\heu@put@title{\heu@bachelor@caffilttitle}} & \heu@caffil \\\
4067 {\songti\heu@put@title{\heu@bachelor@cmajortitlecov}} & \heu@csubject \\\
4068 {\songti\heu@put@title{\heu@bachelor@cstudenttitle}} & \heu@cauthor\\
4069 {\songti\heu@put@title{\heu@bachelor@csupervisortitle}} & \heu@csupervisor\quad\heu@

```

```

4070 \end{tabular} \renewcommand{\arraystretch}{1}
4071 \end{center}}}
4072 \parbox[t][1.4cm][t]{\textwidth}{
4073 \begin{center}\kaishu\xiaoer{\heu@cschoolname}\end{center}}
4074 {\songti\xiaosan{\heu@cdate}}
4075 \end{center}
4076 }
4077

```

本科封二

```

4078 \newcommand{\heu@second@titlepage@bachelor}{
4079 \vspace*{0.5cm}
4080 {\songti\xiaosi
4081 \begin{tabular}{@{\qquad\qquad}@{}r@{}l@{}l@{\qquad}}
4082 & & \\\
4083 & &
4084 \end{tabular}}\hfill
4085 {\songti\xiaosi
4086 \begin{tabular}{@{}r@{:}l@{}l@{\qquad}}
4087 \heu@bachelor@cstudentidtitle & \underline{\makebox[2.5cm]{\heu@cstudentid}} & \\\
4088 \heu@bachelor@secretlevel & \underline{\makebox[2.5cm]{\heu@statesecrets}} &
4089 \end{tabular}}
4090 \vspace*{1.5cm}
4091 \begin{center}
4092 \parbox[t][8.0cm][t]{\textwidth}
4093 {\heiti\xiaosan
4094 \begin{center}\erhao\heiti\heu@ctitlecover\end{center}
4095 \ifheu@subtitle\begin{center}\hspace{-4em}\xiaoer\heiti\pozhehao\heu@csubtitle\er
4096 \begin{center}\erhao{\heu@etitle}\end{center}
4097 \begin{center}\xiaoer\textbf{\ifheu@subtitle\heu@title@esep\heu@esubtitle\fi}\end{center}
4098 }
4099 \parbox[t][9.8cm][b]{\textwidth}
4100 {\heiti\xiaosan
4101 \setlength{\heu@title@width}{6em}
4102 \begin{center} \renewcommand{\arraystretch}{1.5} \songti
4103 \begin{tabular}{l@{\heu@title@csep}l}
4104 \textbf{\heu@put@title{\heu@bachelor@cstudenttitle}} & \heu@cauthor\\
4105 \textbf{\heu@put@title{\heu@bachelor@ccolegetitle}} & \heu@caffil\\
4106 \textbf{\heu@put@title{\heu@bachelor@cmajortitlesec}} & \heu@csubject\\
4107 \textbf{\heu@put@title{\heu@bachelor@csupervisortitle}} & \heu@csupervisor\\
4108 \textbf{\heu@put@title{\heu@bachelor@cprofessionaltitle}} & \heu@cprofessional\\
4109 \textbf{\heu@put@title{\heu@bachelor@cupervisoraffiltitle}} & \heu@csupervisorcaffi
4110 \textbf{\heu@put@title{\heu@csubmitdatatitle}} & \heu@csubmitdate\\
4111 \textbf{\heu@put@title{\heu@coralexdatetitle}} & \heu@coralexdate\\
4112 \textbf{\heu@put@title{\heu@cschoolnametitle}} & \heu@cschoolname
4113 \end{tabular} \renewcommand{\arraystretch}{1}
4114 \end{center}
4115 }
4116 \end{center}
4117 }

```

4118

硕博论文封面

```

4119 \newcommand{\heu@first@titlepage@other}{
4120 \ifthenelse%
4121 {\equal{\heu@fontset}{siyuan}}%
4122 {\xiaosi[1]\textcolor[rgb]{1,1,1}{\songti{\heu@motto}}}%
4123 \vspace*{0.1cm}
4124 \begin{center}
4125   {\songti\xiaosi
4126     \begin{tabular}{@{\qquad}@{}r@{: }l@{}l@{\qquad}}
4127       \heu@natclassifiedindextitle      & \underline{\makebox[2.5cm]{\heu@natclassifiedindextitle}} \\
4128       \heu@internatclassifiedindextitle & \underline{\makebox[2.5cm]{\heu@intclassifiedindextitle}} \\
4129     \end{tabular}}\hfill
4130   {\songti\xiaosi
4131     \begin{tabular}{@{}r@{: }l@{}l@{\qquad}}
4132       \heu@secretlevel  & \underline{\makebox[2.5cm]{\heu@statesecrets}} & \\\
4133       \heu@cnumbertitle & \underline{\makebox[2.5cm]{\heu@cnumber}}      & \\
4134     \end{tabular}}
4135
4136   \vspace*{2.0cm}
4137   \parbox[t][1.2cm][t]{\textwidth}{\xiaoer[1]
4138     \begin{center}\xiaoer[1]\songti{\heu@cdegree\heu@cthesisname}\end{center}}
4139 % 修改第二行标题：学术类型
4140   \parbox[t][1.2cm][t]{\textwidth}{\quad}
4141   \parbox[t][6.0cm][t]{\textwidth}{%
4142     \begin{center}\erhao\heiti\heu@ctitlecover\end{center}
4143     \ifheu@subtitle\begin{center}\hspace{-4em}\xiaoer\heiti\pozhehao\heu@csubtitle\end{center}
4144     \parbox[t][7.4cm][t]{\textwidth}{
4145       {\xiaosan
4146         \setlength{\heu@title@width}{7em}
4147         \begin{center} \renewcommand{\arraystretch}{1.62} \songti
4148           \begin{tabular}{l@{\heu@title@csep}l}
4149             {\songti\heu@put@title{\heu@cauthor}} & \heu@cauthor\\
4150             {\songti\heu@put@title{\heu@cassosupervisor}} & \heu@cassosupervisor\\
4151             \ifx\heu@cassosupervisor\empty\else%
4152               {\songti\heu@put@title{\heu@cassosupervisortitle}} & \heu@cassosupervisor\\
4153             \fi
4154             \ifheu@profdegree%
4155               {\songti\heu@put@title{\heu@ccosupervisortitle}} & \heu@ccosupervisor \\
4156               {\songti\heu@put@title{\heu@cprodrreetitle}} & \heu@cstudenttype \\
4157             \else%
4158               {\songti\heu@put@title{\heu@csubject}} & \heu@csubject \\
4159             \fi
4160             \ifx\heu@creviewer\empty\else%
4161               {\songti\heu@put@title{\heu@creviewertitle}} & \heu@creviewer
4162             \fi
4163           \end{tabular} \renewcommand{\arraystretch}{1}
4164         \end{center}}
4165     \parbox[t][3.0cm][b]{\textwidth}{

```



```

4166 \begin{center}\kaishu\xiaoer{\heu@cschoolname}\end{center}}
4167 {\songti\xiaosan{\heu@cdate}}
4168 \end{center}
4169 }
4170

```

硕博论文内封

```

4171 \newcommand{\heu@second@titlepage@other}{
4172 \begin{center}
4173 {\songti\xiaosi
4174 \begin{tabular}{@{\quad}@{}r@{: }l@{}l@{\quad}}
4175 \heu@natclassifiedindextitle & \underline{\makebox[2.5cm]{\heu@natclassifiedindextitle}} \\
4176 \heu@internatclassifiedindextitle & \underline{\makebox[2.5cm]{\heu@intclassifiedindextitle}} \\
4177 \end{tabular}}\hfill
4178 {\songti\xiaosi
4179 \begin{tabular}{@{}r@{: }l@{}l@{\quad}}
4180 \heu@secretlevel & \underline{\makebox[2.5cm]{\heu@statesecrets}} & \\\
4181 \heu@cnumbertitle & \underline{\makebox[2.5cm]{\heu@cnumber}} & \\
4182 \end{tabular}}
4183 \parbox[t][2.0cm][t]{\textwidth}\begin{center} \end{center}}
4184 \parbox[t][1.2cm][t]{\textwidth}\xiaoer[1]
4185 \begin{center}\songti\heu@cdegree\heu@cthesisname\end{center}}
4186 % 修改第二行标题：学术类型
4187 \parbox[t][1.2cm][t]{\textwidth}\quad
4188 \parbox[t][5cm][t]{\textwidth}\erhao
4189 \begin{center}\heiti\heu@ctitlecover\end{center}
4190 \ifheu@subtitle\hspace{-4em}\xiaoer\heiti\pozhehao\heu@csubtitle\fi
4191 \ifheu@profdegree{\begin{center}\sihao\songti\par\heu@searctype\end{center}}\else%
4192 \parbox[t][9.8cm][b]{\textwidth}
4193 {\sihao
4194 \setlength{\heu@title@width}{6em}
4195 \begin{center} \renewcommand{\arraystretch}{1.5} \songti
4196 \begin{tabular}{l@{\heu@title@csep}l}
4197 \textbf{\heu@put@title{\heu@cauthortitle}} & \heu@cauthor\\
4198 \textbf{\heu@put@title{\heu@csupervisortitle}} & \heu@csupervisor\\
4199 \ifx\heu@cassosupervisor\empty\else%
4200 \textbf{\heu@put@title{\heu@cassosupervisortitle}} & \heu@cassosupervisor\\
4201 \fi
4202 \ifheu@profdegree%
4203 \textbf{\heu@put@title{\heu@ccosupervisortitle}} & \heu@ccosupervisor\\
4204 \textbf{\heu@put@title{\heu@cprosubjecttile}} & \heu@csubject\\
4205 \textbf{\heu@put@title{\heu@ccolegetitle}} & \heu@caffil\\
4206 \else%
4207 \textbf{\heu@put@title{\heu@cdegreetitle}} & \heu@cdegree\\
4208 \textbf{\heu@put@title{\heu@csubjecttitle}} & \heu@csubject\\
4209 \textbf{\heu@put@title{\heu@caffiltile}} & \heu@caffil\\
4210 \fi
4211 \textbf{\heu@put@title{\heu@csubmitdatatitle}} & \heu@csubmitdate\\
4212 \textbf{\heu@put@title{\heu@coralexdatetitle}} & \heu@coralexdate\\
4213 \textbf{\heu@put@title{\heu@cschoolnametitle}} & \heu@cschoolname

```

```

4214 \end{tabular} \renewcommand{\arraystretch}{1}
4215 \end{center} }
4216 \end{center}
4217 }

```

硕博论文英文内封

```

4218 \newcommand{\emultiline}[2][c]{\renewcommand{\arraystretch}{1}\begin{tabular}[#1]{@{}l@{}}
4219 \newcommand{\heu@engcover}{
4220   {\songti\xiaosi
4221     \begin{tabular}{@{\qquad}l@{}l@{\qquad}}
4222       Classified Index:\ \heu@natclassifiedindex & \\\
4223       U.D.C:\ \heu@intclassifiedindex &
4224     \end{tabular}}\hfill
4225   {\songti\xiaosi
4226     \begin{tabular}{@{}r@{}l@{}l@{\qquad}}
4227       & & \\\
4228       & &
4229     \end{tabular}}
4230   \vspace*{1em}
4231   \begin{center}
4232 % 工程硕士、非全日制学位论文英文封面第一行文字不同。
4233   \parbox[t][1.6cm][t]{\textwidth}\begin{center} \end{center} }
4234   \parbox[t][1.2cm][t]{\textwidth}{\xiaoer[1]
4235     \begin{center}
4236       \ifheu@profdegree A Thesis for the Degree of {\heu@estudenttype}
4237       \else A Dissertation for the Degree of {\heu@exuweier}
4238       \fi
4239     \end{center}}
4240   \parbox[t][1.2cm][t]{\textwidth}{\xiaoer[1] \qquad}
4241   \parbox[t][7cm][t]{\textwidth}{%
4242     \begin{center}\erhao{\heu@etitle}\end{center}
4243     \begin{center}\xiaoer{\ifheu@subtitle\heu@title@esep\heu@esubtitle\fi}\end{center}}
4244   {\xiaosi\renewcommand{\arraystretch}{1.3}
4245     \begin{tabular}{@{}r@{~}l@{}}
4246       \textbf{\heu@eauthortitle\heu@title@esep} & \heu@eauthor\\
4247       \textbf{\heu@esupervisortitle\heu@title@esep} & \heu@esupervisor\\
4248       \ifx\heu@eassosupervisor\empty\else%
4249       \textbf{\heu@put@title\heu@eassosupervisortitle}} & \heu@eassosupervisor\\
4250       \fi
4251       \ifheu@profdegree%
4252       \textbf{\heu@eassosupervisortitle\heu@title@esep} & \heu@eassosupervisor\\
4253       \textbf{\heu@ecategorytitle\heu@title@esep} & \heu@esubject\\
4254       \textbf{\heu@eaffilttitle\heu@title@esep} & \heu@eaffil\\
4255       \else%
4256       \textbf{\heu@edegreetitle\heu@title@esep} & \heu@edegree\\
4257       \textbf{\heu@esubjecttitle\heu@title@esep} & \heu@esubject\\
4258       \fi
4259       \textbf{\heu@esubmitdatetitle\heu@title@esep} & \heu@esubmitdate\\
4260       \textbf{\heu@eoralexdatetitle\heu@title@esep} & \heu@eoralexdate\\
4261       \textbf{\heu@eschoolnametitle\heu@title@esep} & \heu@eschoolname

```

```

4262         \end{tabular}\renewcommand{\arraystretch}{1}}
4263     \end{center}
4264 }
4265

```

生成封面。

```

4266 \def\makecover{
4267     \phantomsection
4268     \pdfbookmark[0]{\heu@ctitle}{ctitle}
4269     \xiaosi[1]%
4270     \begin{titlepage}
4271         \ifheu@yantai
4272             \ifheu@bachelor
4273                 \relax
4274             \else
4275                 \heu@first@titlepage
4276                 \ifheu@library\clearpage\else\cleardoublepage\fi
4277             \fi
4278         \else
4279             \heu@first@titlepage
4280             \ifheu@library\clearpage\else\cleardoublepage\fi
4281         \fi
4282         \heu@second@titlepage
4283         \ifheu@library\clearpage\else\cleardoublepage\fi
4284         \ifheu@postdoc
4285             \relax
4286         \else
4287             \ifheu@bachelor
4288                 \relax
4289             \else
4290                 \phantomsection
4291                 \pdfbookmark[0]{\heu@etitle}{etitle}
4292                 \heu@engcover
4293                 \ifheu@library\clearpage\else\cleardoublepage\fi
4294             \fi
4295         \fi
4296     \end{titlepage}
4297     \normalsize
4298     \cleardoublepage}

```

生成独创性声明和授权签字页。

```

4299 \def\heu@authorization@other{%
4300     \ifheu@openright\cleardoublepage\else\clearpage\fi
4301     % \heu@appendix@chapter*{\heu@authorization@ctitle}[\heu@authorization@etitle]
4302     % \xiaosi[1.5]\vspace{\baselineskip}
4303     \begin{center}
4304         \quad\quad
4305         \xiaoser\heiti\heu@cschoolname\\%
4306         \vspace{0.25\baselineskip}%
4307         \heu@declarename
4308     \end{center}

```

```

4309 \vspace{0.25\baselineskip}
4310 \par\heu@declaretext
4311 \vspace{\baselineskip}
4312 \par\hspace{23em}{\wuhao \heu@authorsig}
4313 \vspace{0.25\baselineskip}
4314 \par\hspace{23em}{\wuhao \heu@frontdate\heu@datefill}
4315 \vspace{\baselineskip}
4316 \begin{center}
4317     \xiaoer\heiti\heu@cschoolname\\%
4318     \vspace{0.25\baselineskip}%
4319     \heu@authorizationtitle
4320 \end{center}
4321 \vspace{0.25\baselineskip}
4322 \par\heu@authorizationtext
4323 \vspace{\baselineskip}
4324 \par\hspace{0em}{\wuhao \heu@authorsig} \hspace{17em} {\wuhao \heu@teachersig}
4325 \vspace{0.5\baselineskip}
4326 \par\hspace{0em}{\wuhao \heu@frontdate\heu@datefill} \hspace{12.5em}{\wuhao \heu@date
4327 \def\heu@authorization@bachelor{%
4328     \ifheu@openright\cleardoublepage\else\clearpage\fi
4329     \heu@appendix@chapter*{\heu@declarename@bachelor}
4330     \heu@authorizationtext@bachelor
4331     \vspace{\baselineskip}
4332     \par\hspace{6em}\heu@authorsig\hfill\heu@frontdate\heu@datefill}
4333 \NewDocumentCommand{\authorization}{o}{%
4334     \IfNoValueTF{#1}{%
4335         \thispagestyle{empty}%
4336         % 本科不需要原创性和授权页，删掉
4337         %\ifheu@bachelor\heu@authorization@bachelor\else\heu@authorization@other\fi
4338         \heu@authorization@other
4339     }{%
4340         \ifheu@openright\cleardoublepage\else\clearpage\fi%
4341         \includepdf[fitpaper=true,pagecommand={%
4342             \thispagestyle{empty}%
4343             % 原创性和授权页不加入到目录
4344             %\phantomsection\addcontentsline{toc}{chapter}{\ifheu@bachelor\heu@declarename
4345             %\ifheu@doctor%
4346             % \addcontentsline{toe}{chapter}{\texorpdfstring{\bfseries \heu@authorization
4347             %\fi%
4348         }]{#1}%
4349     }%
4350 }

```

生成摘要和关键字。

```

4351 \newbox\heu@kw
4352 \newcommand\heu@put@keywords[2]{%
4353     \begingroup
4354     \setbox\heu@kw=\hbox{#1}
4355     \noindent\hangindent\wd\heu@kw\hangafter1%
4356     \box\heu@kw#2\par

```

```

4357 \endgroup}
4358 \newcommand{\makeabstract}{%
4359 \ifheu@openright\cleardoublepage\else\clearpage\fi
4360 \ifheu@english
4361 \addtocontents{toc}{~\hfill\textbf{Page}\par}
4362 \addtocontents{\ext@table}{\noindent\sihao\textbf{Table}~\hfill\textbf{Page}}\par}%
4363 \addtocontents{\ext@figure}{\noindent\sihao\textbf{Figure}~\hfill\textbf{Page}}\par}
4364 \fi

```

摘要不加入目录、不在页眉显示

```

4365 % \heu@appendix@chapter*{\cabstractcname}{\cabstractename}
4366 \pagestyle{heu@titleheadings}
4367 \pagenumbering{Roman}
4368 \begin{center}
4369 ~\
4370 \xiaoer\heiti\cabstractcname
4371 \end{center}\par
4372 \heu@cabstract
4373 \vskip12bp
4374 \heu@put@keywords{\ifheu@postdoc\bfseries\fi\heiti\heu@ckeywords@title}{\heu@ckeywor

```

博后关键字加粗

```

4375 \ifheu@openright\cleardoublepage\else\clearpage\fi
4376 \clearpage

```

摘要不加入目录、不在页眉显示

```

4377 % \heu@appendix@chapter*{\eabstractcname}{\eabstractename}
4378 \begin{center}
4379 ~\
4380 \xiaoer\textbf{\eabstractcname}
4381 \end{center}\par
4382 \heu@eabstract
4383 \vskip12bp
4384 \heu@put@keywords{\textbf{Keywords:\enskip}}{\heu@ekeywords}}

```

定义符号表。

```

4385 \newenvironment{denotation}[1][2.5cm]{%
4386 \ifheu@openright\cleardoublepage\else\clearpage\fi
4387 \heu@appendix@chapter*{\heu@denotation@ctitle}{\heu@denotation@etitle}
4388 \setcounter{table}{0}
4389 \renewcommand{\thetable}{\arabic{table}}% 使表编号为 1 的格式
4390 }{\renewcommand{\thetable}{\arabic{chapter}.\arabic{table}}}% 使表编号为 7.1 的
    格式
4391 \setcounter{table}{0}}%

```

定义索引、目录格式

```

4392 \def\heu@starttoc#1{% #1: float type, prepend type name in \listof*** entry.
4393 \let\oldnumberline\numberline
4394 \def\numberline##1{\oldnumberline{\csname #1name\endcsname\hskip.4em ##1}}
4395 \@starttoc{\csname ext@#1\endcsname}
4396 \let\numberline\oldnumberline}
4397 \def\heu@listof#1#2{% #1: float type

```

```

4398 \clearpage
4399 % \ifheu@openright\cleardoublepage\else\clearpage\fi

```

前文的图、表清单不列入目录

```

4400 % \heu@appendix@chapter*[\csname list#lname\endcsname]{\csname list#lname\endcsname}[
4401 \begin{center}
4402 ~\
4403 {\xiaoer\heiti{\csname list#lname\endcsname}}
4404 \end{center}\par
4405 \heu@starttoc{#1}}

```

只有英文版用到，且需要 `clearpage`

```

4406
4407 \renewcommand\listoffigures{\heu@listof{figure}{\listfigureenname}}
4408 \renewcommand*\l@figure{\addvspace{6bp}\@dottedtocline{1}{0em}{4em}}
4409 \renewcommand\listoftables{\heu@listof{table}{\listtableenname}}
4410 \let\l@table\l@figure
4411 \def\ext@equation{loe}
4412 \def\equcaption#1{%
4413 \addcontentsline{\ext@equation}{equation}%
4414 {\protect\numberline{#1}}}
4415 \newcommand\listofequations{\heu@listof{equation}{\listequationenname}}
4416 \let\l@equation\l@figure

```

4.5.10 目录

默认目录是三级，如需要四级目录需要设置 `tocfour=true`。

```

4417 \setcounter{secnumdepth}{3}
4418 \setcounter{tocdepth}{2}
4419 \ifheu@bachelor\ifheu@tocfour\setcounter{tocdepth}{3}\fi\fi
4420 \renewcommand\tableofcontents{%
4421 \ifheu@openright\cleardoublepage\else\clearpage\fi
4422 \phantomsection
4423 \markboth{\contentsname}{ccontent}

```

工程大学论文要求：目录中的目录位置是空白。

```

4424 %\heu@chapter*{\contentsname}
4425 \begin{center}
4426 ~\
4427 \xiaoer\heiti\contentsname
4428 \end{center}\par
4429 \pdfbookmark[0]{\contentsname}{ccontent}
4430 \normalsize\@starttoc{toc}
4431 \ifheu@doctor
4432 \tableofengcontents

```

有些硕士的范例中带有英文目录，这里添加手动开关 `engtoc=true`

```

4433 \else
4434 \ifheu@engtoc
4435 \tableofengcontents
4436 \fi
4437 \fi

```

将英文目录嵌入中文目录命令中

```
4438 \ifheu@english
4439 \printnoidxglossary[sort=word,style=engstyle,title={Nomenclature},nopostdot,nonumberlis
4440 \listoftables
4441 \listoffigures
4442 \fi
4443 }
```

添加英文 toc 控制按照我校要求的目录格式。

```
4444 \ifheu@arialtoc
4445   \def\heu@toc@font{\sffamily}
4446 \fi
4447 \def\@pnumwidth{4em}% 规定中的提前悬挂
4448 \def\@tocrmarg{\@pnumwidth}
4449 \def\@dotsep{1}
```

此处临时更改一下对齐方式。CT_EX 似乎无法应对双语目录。将 leftskip 设置参数至于外侧，以便后续添加可以适应标题长度的\contentsline 方法

```
4450 \setlength\@tempdima{4em}%
4451 \patchcmd{\dottedtocline}{#4}{\csname heu@toc@font\endcsname #4}{}{}
4452 \patchcmd{\dottedtocline}{\hb@xt@\@pnumwidth}{\hbox}{}{}
4453 \renewcommand*\l@chapter[2]{%
4454   \ifnum \c@tocdepth >\m@ne
4455     \addpenalty{-\@highpenalty}%
4456     %\vskip 4bp \@plus\p@
4457     \begingroup
4458       \parindent \z@ \rightskip \@pnumwidth
4459       \parfillskip -\@pnumwidth
4460       \leavevmode
4461       \advance\leftskip\@tempdima
4462       \hskip -\leftskip
4463       % numberline is called here, and it uses \@tempdima
4464       {\ifheu@bachelor\rmfamily\else\csname
4465         heu@toc@font\endcsname\fi\heiti\ifheu@postdoc\bfseries\fi\ifheu@english\bfseries
```

博后和英文版需要加粗

```
4466       \leaders\hbox{$\m@th\mkern \@dotsep mu\hbox{.}\mkern \@dotsep mu$\}\hfill
4467       \nobreak{\normalfont\normalcolor #2}\par
4468       \penalty\@highpenalty
4469     \endgroup
4470   \fi}
```

按工程大学标准, 缩小目录中各级标题之间的缩进, 使它们相隔一个字符距离, 也就是 12pt。

```
4471 \renewcommand*\l@section{\dottedtocline{1}{1em}{1.8em}}
4472 \renewcommand*\l@subsection{\dottedtocline{2}{2em}{2.5em}}
4473 \renewcommand*\l@subsubsection{\dottedtocline{3}{3\ccwd}{3.1em}}
```

英文目录格式。

```
4474 \def\@dotsep{0.75} % 定义英文目录的点间距
4475 \setlength\leftmargini {0pt}
4476 \setlength\leftmarginii {0pt}
4477 \setlength\leftmarginiii {0pt}
```

```

4478 \setlength\leftmarginiv {0pt}
4479 \setlength\leftmarginv {0pt}
4480 \setlength\leftmarginvi {0pt}
4481
4482 \def\engcontentsname{\bfseries Contents}
4483 \newcommand\tableofengcontents{

```

此处添加英文目录的章标题格式，默认细点

```

4484 \def\l@chapter{\@dottedtocline{0}{0em}{5em}}% 控制英文目录：细点\@dottedtocline 粗
点\@dottedtoclinebold
4485 \@restonecolfalse
4486 \chapter*{\engcontentsname %chapter* 上移一行，避免在 toc 中出现。
4487 \pdfbookmark[0]{Contents}{econtent}
4488 \@mkboth{%
4489 \engcontentsname}{\engcontentsname}}

```

此处临时更改一下对齐方式。CT_EX 似乎无法应对双语目录。

```

4490 \@starttoc{toe}%
4491 \if@restonecol\twocolumn\fi}
4492 \def\@dotsep{0.75} % 定义英文目录的点间距

```

目录中附录的章号格式。

```

4493 \ctexset{%
4494   appendix/number=\ifheu@bachelor\arabic{chapter}\else\Alph{chapter}\fi,
4495 }

```

设置附录、结论、参考文献等格式。

```

4496 \let\heu@appendix\appendix
4497 \renewenvironment{appendix}[2]{%
4498 \heu@appendix
4499 \ifheu@bachelor\renewcommand{\thechapter}{\arabic{chapter}}\fi
4500 \ifheu@openright\cleardoublepage\else\clearpage\fi
4501 \renewcommand{\thechapter}{#1} % 修改附录序号
4502 \ifheu@english
4503 \addcontentsline{toc}{chapter}{\heu@appendix@etitle #1 ~ #2}
4504 \begin{center}
4505   ~\
4506   \xiaoer\heiti\heu@appendix@etitle #1 ~ #2
4507 \end{center}\par
4508 \else
4509 \addcontentsline{toc}{chapter}{\heu@appendix@ctitle #1 ~ #2}
4510 \begin{center}
4511   ~\
4512   \xiaoer\heiti\heu@appendix@ctitle #1 ~ #2
4513 \end{center}\par
4514 \fi}{%
4515 \let\title\@gobble}
4516 \let\title\@gobble
4517
4518 \newlist{translationbib}{enumerate}{1}
4519 \setlist[translationbib]{label=[\arabic*],align=left,nosep,itemsep=6bp,
4520   leftmargin=10mm,labelsep=!,before=\vspace{0.5\baselineskip}\wuhao[1.3]}

```



```

4521
4522 \newenvironment{conclusions}{%
4523 \ifheu@openright\cleardoublepage\else\clearpage\fi
4524 \ifheu@english
4525 %\heu@appendix@chapter*{\heu@conclusion@etitle}
4526 \addcontentsline{toc}{chapter}{\heu@conclusion@etitle}
4527 \begin{center}
4528   ~\
4529   \xiaoer\heiti\heu@conclusion@etitle
4530 \end{center}\par
4531 \else
4532 %\heu@appendix@chapter*{\heu@conclusion@ctitle}[\heu@conclusion@etitle]
4533 \addcontentsline{toc}{chapter}{\heu@conclusion@ctitle}
4534 \begin{center}
4535   ~\
4536   \xiaoer\heiti\heu@conclusion@ctitle
4537 \end{center}\par
4538 \fi}{ }
4539
4540 \newenvironment{acknowledgements}{%
4541   \ifheu@openright\cleardoublepage\else\clearpage\fi
4542   \ifheu@english
4543   %\heu@appendix@chapter*{\heu@acknowledgement@etitle}
4544   \addcontentsline{toc}{chapter}{\heu@acknowledgement@etitle}
4545   \begin{center}
4546     ~\
4547     \xiaoer\heiti\heu@acknowledgement@etitle
4548   \end{center}\par
4549   \else
4550   %\heu@appendix@chapter*{\heu@acknowledgement@ctitle}[\heu@acknowledgement@etitle]
4551   \addcontentsline{toc}{chapter}{\heu@acknowledgement@ctitle}
4552   \begin{center}
4553     ~\
4554     \xiaoer\heiti\heu@acknowledgement@ctitle
4555   \end{center}\par
4556   \fi}{ }
4557
4558 \newenvironment{correspondingaddr}{%
4559   \ifheu@openright\cleardoublepage\else\clearpage\fi
4560   %\heu@appendix@chapter*{\heu@correspondingaddr@ctitle}
4561   \addcontentsline{toc}{chapter}{\heu@correspondingaddr@ctitle}
4562   \begin{center}
4563     ~\
4564     \xiaoer\heiti\heu@correspondingaddr@ctitle
4565   \end{center}\par
4566   }{ }
4567

```

博后用到的通讯页面

```

4568 \newenvironment{resume}{%

```

```

4569 \ifheu@openright\cleardoublepage\else\clearpage\fi
4570 %\heu@appendix@chapter*\heu@resume@ctitle][\heu@resume@etitle]
4571 \addcontentsline{toc}{chapter}{\heu@resume@ctitle}
4572 \begin{center}
4573   ~\\
4574   \xiaoer\heiti\heu@resume@ctitle
4575 \end{center}\par
4576 {}{}
4577
4578 \newenvironment{publication}{%
4579 \ifheu@openright\cleardoublepage\else\clearpage\fi
4580 %\heu@appendix@chapter*\heu@publication@ctitle][\heu@publication@etitle]
4581 \addcontentsline{toc}{chapter}{\heu@publication@ctitle}
4582 \begin{center}
4583   ~\\
4584   \xiaoer\heiti\heu@publication@ctitle
4585 \end{center}\par
4586 {}{}
4587
4588 \newenvironment{doctorpublication}{%
4589 \ifheu@openright\cleardoublepage\else\clearpage\fi
4590 %\heu@appendix@chapter*\heu@doctorpublication@ctitle}
4591 \addcontentsline{toc}{chapter}{\heu@doctorpublication@ctitle}
4592 \begin{center}
4593   ~\\
4594   \xiaoer\heiti\heu@doctorpublication@ctitle
4595 \end{center}\par
4596 {}{}
4597

```

此处添加博后用到的博士生发表页面此处中英文索引的格式设置尽量符合《[哈尔滨工程大学研究生学位论文撰写规范](#)》中给出的示例的格式。此处间距常数是人工调节的。

```

4598 \newenvironment{ceindex}{%
4599 \ifheu@openright\cleardoublepage\else\clearpage\fi
4600 %\heu@appendix@chapter*\indexname][\heu@index@etitle]
4601 \addcontentsline{toc}{chapter}{\indexname}
4602 \begin{center}
4603   ~\\
4604   \xiaoer\heiti\indexname
4605 \end{center}\par
4606 \setlength{\columnsep}{4em}
4607 \begin{adjustwidth}{2em}{2em}
4608 \begin{multicols*}{2}}{\end{multicols*}
4609 \end{adjustwidth}
4610 }
4611
4612 \newlist{idxwordlist}{description}{3}
4613 \setlist[idxwordlist, 1]{%
4614   itemsep=\baselineskip,
4615   labelindent=8em,

```

```

4616 font=\normalsize\bfseries,
4617 }
4618 \setlist[idxwordlist, 2]{%
4619   nosep,
4620   labelindent=2em,
4621   font=\wuhao\rm,
4622 }
4623 \setlist[idxwordlist, 3]{%
4624   nosep,
4625   labelindent=4em,
4626   font=\wuhao\rm,
4627 }
4628
4629 \newcommand\bibstyle@numerical{\bibpunct[{}{}]{,}{s}{,}{\textsuperscript{,}}{}}
4630 \citestyle{numerical}
4631 \DeclareRobustCommand\inlinecite{\@inlinecite}
4632 \def\@inlinecite#1{\begingroup\citestyle{inline}\let\@cite\NAT@citenum\citep{#1}\endgroup}
4633 \let\onlinecite\inlinecite
4634 \newcommand{\lcite}{\inlinecite}
4635 \renewenvironment{thebibliography}[1]{%
4636   \ifheu@openright\cleardoublepage\else\clearpage\fi\phantomsection%
4637   %\heu@appendix@chapter*\bibname[\heu@bibname@etitle]
4638   \addcontentsline{toc}{chapter}{\bibname}
4639   \begin{center}
4640     ~\
4641     \xiaoer\heiti\bibname
4642   \end{center}\par
4643   \normalsize
4644   \list{\@biblabel{\@arabic{c@enumiv}}}%
4645   {\renewcommand{\makelabel}[1]{##1\hfill}
4646     \settowidth{\labelwidth}{\@biblabel{#1}}
4647     \setlength{\labelsep}{0.5em}
4648     \setlength{\itemindent}{0pt}
4649     \setlength{\leftmargin}{\labelsep+\labelwidth}
4650     \addtolength{\itemsep}{-0.8em}
4651     \usecounter{enumiv}%
4652     \let\p@enumiv\@empty
4653   \renewcommand\theenumiv{\@arabic{c@enumiv}}%
4654   \sloppy\frenchspacing
4655   \flushbottom
4656   \ifheu@splitbibitem
4657     \clubpenalty0
4658     \@clubpenalty \clubpenalty
4659     \widowpenalty0%
4660     \interlinepenalty-50%
4661   \else
4662     \clubpenalty4000
4663     \@clubpenalty \clubpenalty
4664     \widowpenalty4000%
4665     \interlinepenalty4000%

```

```

4666 \fi
4667 \sfcode`\.\@m}
4668 {\def\@noitemerr
4669 {\@latex@warning{Empty `thebibliography' environment}}}%
4670 \endlist\@frenchspacing}
4671 \patchcmd\NAT@citexnum{%
4672 \@ifnum{\NAT@ctype=\z@}{%
4673 \if*#2*\else\NAT@cmt#2\fi
4674 }{}%
4675 \NAT@mbox{\NAT@@close}%
4676 }{}%
4677 \NAT@mbox{\NAT@@close}%
4678 \@ifnum{\NAT@ctype=\z@}{%
4679 \if*#2*\else\textsuperscript{#2}\fi
4680 }{}%
4681 }{}{}
4682 \renewcommand\NAT@citesuper[3]{\ifNAT@swa
4683 \if*#2*\else#2\NAT@spacechar\fi
4684 \unskip\kern\p@\textsuperscript{\NAT@@open#1\NAT@@close\if*#3*\else#3\fi}%
4685 \else #1\fi\endgroup}
4686 \patchcmd{\NAT@citex}{%
4687 \if*#2*\else\NAT@cmt#2\fi
4688 \if\relax\NAT@date\relax\else\NAT@@close\fi
4689 }{}%
4690 \if\relax\NAT@date\relax\else\NAT@@close\fi
4691 \if*#2*\else\textsuperscript{#2}\fi
4692 }{}{}
4693 \renewcommand\NAT@cite%
4694 [3]{\ifNAT@swa\NAT@@open\if*#2*\else#2\NAT@spacechar\fi
4695 #1\NAT@@close\if*#3*\else\textsuperscript{#3}\fi\else#1\fi\endgroup}
4696 </bookcls>

```

4.6 其它

在模板文档结束时即装入配置文件，这样用户就能在导言区进行相应的修改。

```

4697 <*bookcls>
4698 \AtEndOfClass{\input{heuthesisbook.cfg}}
4699 \AtEndOfClass{\sloppy}
4700 </bookcls>

```

5 修改记录

v1.0.1	GBT7714-2015	22
General: 矫正英文目录缩进与中文目录一致的	v1.0.4	
bug	General: 修改附录格式	120
v1.0.2	v1.0.5	
General: 移植自 hitThesis 论文模板	General: 根据 2026.02.28 哈尔滨工程大学最新	22
v1.0.3	要求修改原创型声明和授权使用声明 ..	115
General: 删除文献格式定义，texlive 已包含		

125

<code>\bibnumber</code>	116	<code>\center</code>	3372, 3417, 3462	<code>\cnumber</code>	11
<code>\biborganization</code>	110	<code>\changes</code>	3900	<code>\Collect@Body</code> ...	3677, 3679
<code>\bibpages</code>	118	<code>\chapter</code> ...	3542, 3545, 4486	<code>\columnsep</code>	4606
<code>\bibpatentid</code>	108	<code>\chaptermark</code>	2905	<code>conclusion (env.)</code>	19
<code>\bibpublisher</code>	112	<code>\chuhao</code>	2762	<code>\contentsname</code>	
<code>\bibpunct</code> ..	2369, 2370, 4629	<code>\cite</code>	3224	...	4423, 4424, 4427, 4429
<code>\bibschooll</code>	114	<code>\citep</code>	2374, 4632	<code>\coralexdate</code>	13
<code>\bibstyle@inline</code>	2370	<code>\citestyle</code>		<code>\cprofessional</code>	13
<code>\bibstyle@numerical</code> ..		...	2372, 2374, 4630, 4632	<code>\creviewer</code>	13
.....	2369, 4629	<code>\citeup</code>	3224	<code>\cstudentid</code>	14
<code>\bibtitle</code>	103	<code>\CJK@today</code> ..	3028, 3029,	<code>\cstudenttype</code>	13
<code>\bibtranslator</code>	102		3031, 3032, 3033, 3309,	<code>\csubject</code>	12
<code>\biburl</code>	123, 819		3310, 3312, 3313, 3314	<code>\csubmitdate</code>	13
<code>\bibversion</code>	117	<code>\CJK@todaybig</code>		<code>\csubtitle</code>	12
<code>\bibvolume</code>	115	...	3027, 3033, 3308, 3314	<code>\csupervisor</code>	13
<code>\bibyear</code>	121	<code>\CJK@todaybig@short</code> ..		<code>ctex (package)</code>	73
<code>booktabs (package)</code>	76	.....	3026, 3307	<code>\CTEX@chapter@aftername</code>	
<code>\bottomfraction</code>	3157	<code>\CJK@todaysave</code> .....		.....	3331, 3332
<code>\box</code>	3178, 3200, 4356	...	3023, 3031, 3304, 3312	<code>\CTEX@chaptername</code>	3331, 3332
<code>build.bat (file)</code>	5	<code>\CJK@todaysmall</code> ..	3025,	<code>ctexbook (package)</code> .	73, 73, 73
			3028, 3032, 3035,	<code>\ctexset</code>	2175, 2908,
			3306, 3309, 3313, 3316		3018, 3259, 3270, 3283,
C		<code>\CJK@todaysmall@short</code>			3364, 3410, 3455, 4493
<code>\c@chapter</code>	2940	...	3024, 3035, 3305, 3316	<code>\CTEXthechapter</code>	2905
<code>\c@enumiv</code>		<code>\CJKtoday</code>	3030, 3311	<code>\ctitle</code>	12
...	2378, 2387, 4644, 4653	<code>\ckeywords</code>	14	<code>\ctitleone</code>	12
<code>\c@equation</code>	2940	<code>\ClassError</code>	2013,	<code>\ctitletwo</code>	12
<code>\c@tocdepth</code>	4454		2026, 2038, 2066, 2533,	<code>\CurrentOption</code> ..	2005, 2502
<code>cabstrack (env.)</code>	14		2559, 2572, 2645, 2917	<code>\cxueke</code>	12
<code>\cabstractcname</code>		<code>\cleardoublepage</code> .	2691,		
...	3299, 3513, 4365, 4370		2722, 2726, 2737, 2746,	D	
<code>\cabstractename</code> .	3296, 4365		3547, 4276, 4280, 4283,	<code>\dachu</code>	2762
<code>\caffil</code>	12		4293, 4298, 4300, 4328,	<code>\dawu</code>	2762
<code>\caption</code>	3205, 3210		4340, 4359, 4375, 4386,	<code>\day</code> ...	3025, 3027, 3306, 3308
<code>\captionnamefont</code>	3225		4399, 4421, 4500, 4523,	<code>\DeclareBoolOption</code> ...	
<code>\captiontitlefont</code> ...	3226		4541, 4559, 4569,	....	1997, 1998, 1999,
<code>\cassosupervisor</code>	13		4579, 4589, 4599, 4636		2000, 2001, 2479, 2480,
<code>\cauthor</code>	12	<code>\clearpage</code>	2357,		2481, 2482, 2483, 2484,
<code>\ccosupervisor</code>	13		2360, 2365, 2717, 2722,		2485, 2486, 2487, 2488,
<code>\ccwd</code> ...	3019, 3056, 3057,		2726, 2737, 2739, 2746,		2489, 2490, 2491, 2492,
	3058, 3059, 3064, 3068,		3547, 4276, 4280, 4283,		2493, 2494, 2495, 2496,
	3069, 3070, 3071, 3072,		4293, 4300, 4328, 4340,		2497, 2498, 2499, 2500
	3073, 3076, 3077, 3078,		4359, 4375, 4376, 4386,	<code>\DeclareDefaultOption</code>	
	3083, 3126, 3161, 3165,		4398, 4399, 4421, 4500,	.....	2005, 2502
	3173, 3183, 3187, 3195,		4523, 4541, 4559, 4569,	<code>\DeclareRobustCommand</code>	
	3273, 3734, 3739, 3753,		4579, 4589, 4599, 4636	2373, 4631
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