A Proposal Template for Huazhong University of Science and Technology: the hustproposal class *

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^{*}This document corresponds to hustproposal.cls v1.1, dated 2016/06/01.

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I Introduction

This is a proposal template for Huazhong University of Science & Technology. This template is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

The whole project is published under LPPL v1.3 License at GitHub. 中文使用说明见 Part II。

English version instruction is in Part III.

II 中文使用说明

1 使用必要条件

- 1. 安装最新版本的 TeXLive (推荐) 或 MiKTeX。因为未及时更新的宏包可能存在未修复的 bug,请确保所有宏包都更新至最新。
- 2. 安装如下中文字体1:
 - a) AdobeSongStd-Light
 - b) AdobeKaitiStd-Regular
 - c) AdobeHeitiStd-Regular
 - d) AdobeFangsongStd-Regular



如果使用LuaTEX,安装字体之后需运行命令mkluatexfontdb 生成字体索引。

2 安装

2.1 安装到本地

使用如下命令即可安装本模板到本地:

make install

如需卸载,则使用如下命令:

make uninstall

对于没有安装 Make 的 Windows 系统用户,可以使用如下命令安装:

makewin32.bat install

如需卸载,则使用如下命令:

makewin32.bat uninstall

虽然 makewin32.bat 表现与 Makefile 极其相似,但是还是强烈建议你安装 Make,对于 Windows 用户可以在这里下载。

 $^{^1}$ 本模板所用到的英文字体 Tex Gyre Termes,Droid Sans 和 CMU Typewriter Text 均默 认安装于 TeXLive 和 MiKTeX 中。

2.2 免安装使用

如果你希望临时使用本模板,而非安装到本地供长期使用。使用如下命令 解压模板文件:

make unpack

对于没有安装 Make 的 Windows 系统用户,则使用如下命令解压:

makewin32.bat unpack

再将文件 hustproposal.cls 拷贝到你 TFX 工程根目录下即可。

3 基本用法



本文档只能使用 XHATEX 或 LualATEX (推荐) 编译。

在源文件开头处选择加载本文档类型,即可使用本模板,如下所示:

\documentclass[language=chinese]{hustproposal}

3.1 文档类型选项

加载本文档类型时,有如下选项提供选择。

language

language = \(chinese | english \)

指定论文语言。如果不指定,默认设置为 chinese。

3.2 基本字段设置

模板中定义一些命令用于设置文档中的字段。

\title \title $\{\langle title \rangle\}$

用于设定标题。

\author \author $\{\langle author \rangle\}$

用于设定作者名。

\major \major $\{\langle major \rangle\}$

用于设定专业。

\department \department{\department\}

用于设定院系。

 $\forall division \division{\langle division \rangle}$

用于设定所属教研室名称。

\supervisor \supervisor{ $\langle supervisor name \rangle$ }{ $\langle supervisor title \rangle$ }

用于设定导师和职称。

其它基本命令 3.3

下面来介绍其它基本命令。

\maketitle \maketitle 用于生成标题。

\bibliography{\langle .bib file\rangle} \bibliography

用于生成参考文献。

\TurnOffTabFontSetting \TurnOnTabFontSetting

> 因为模板中设定了表格的行距和字号, 使得使用中无法临时自定义表格的行距 和字号。故提供两个命令用于关闭和开启默认表格的行距和字号设置。比如你 如果需要输出一个自己定义字号的表格,可以使用如下示例:

\begingroup \TurnOffTabFontSetting \footnotesize % 设置字号 \begin{tabular}{...} <content> \end{tabular} \TurnOnTabFontSetting \endgroup

\email $\ensuremath{\mbox{\mbox{\it L}mail}} Address \}$

> 用于生成邮箱地址。如\email{name@example.com}会生成如下效果的地址: name@example.com •

示例 4

如下为一个使用本模板的示例。

```
\documentclass[language=chinese]{hustproposal}
3 \department{院系}
4 \title{标题}
5 \author{作者名}
6 \major{专业}
7 \division{所属教研室}
  \supervisor{导师}{职称}
10 \begin{document}
11 \maketitle
13 \section{目的和意义}
14 \section{应用现状}
15 \section{内容与目标}
16 \section{思路与步骤}
17 \section{进度安排}
19 \bibliography{参考文献.bib文件}
  \end{document}
```

5 预设宏包介绍

本模板中预设了一些宏包, 下面对其进行简单介绍。

- algorithm2e 算法环境。
- enumitem 自定义列表环境的式样。
- fancynum 用于将大数每三位断开。
- listings 代码环境。如需更好的代码高亮可以使用 minted 宏包。
- longtable 跨页的超长表格环境。
- Itxtable longtable 环境和 tabularx 环境的合并。
- multirow 用于表格中合并行。
- overpic 用于在图片上层叠其他内容。
- tabularx 扩展到表格环境。
- zhnumber 用于生成中文数字。

6 高级设置

6.1 切换字体

模板正文字体为宋体 (AdobeSongStd-Light),同时我们提供如下命令切换中文字体:

```
\HEI \ \{\HEI \ \langle content \rangle\}
           \hei{\langle content \rangle}
     \hei
           切换字体为黑体(AdobeHeitiStd-Regular)。
           \{\KAI \ (content)\}
     \KAI
            \hat{\langle content \rangle}
     \kai
            切换字体为楷体 (AdobeKaitiStd-Regular)。
           \{ \ \ \langle \texttt{content} \rangle \}
\FANGSONG
            \lceil \langle content \rangle \rceil
\fangsong
            切换字体为仿宋(AdobeFangsongStd-Regular)。
               如果需要加载其他字体,请参阅宏包 fontspec,宏包 xeCJK (对于 XHATEX)
           和宏包 luatex-ja (对于 Lual/TEX)的文档。
```

III English Version Instruction

1 Requirement

Install the latest version of TeXLive(Recommend) or MiKTeX. Please ensure that all the packages are up-to-date.

2 Installation

2.1 Install into local

Use the command below to install this template into local.

```
make install
```

If you need uninstall it, use the command below.

```
make uninstall
```

For Windows User who don't install Make, use the command below to install.

```
makewin32.bat install
```

If you need uninstall it, use the command below.

```
makewin32.bat uninstall
```

Although makewin32.bat behaves much like Makefile, I still recommend you install Make into your Windows. You can download it from here.

2.2 Use without installation

If you want to use this template temporary rather than installing it into local for long term use. Run below command to unpack the package.

```
make unpack
```

For Windows User who don't install Make, use the command below to unpack the package.

```
makewin32.bat unpack
```

Then copy the file hustproposal.cls into your TEX project root directory.

3 Usage



This template can only be compiled by XALTEX orLualTEX(Recommend).

Insert below code in the top of source code to use this template:

\documentclass[language=english]{hustproposal}

3.1 Option

There's one option available when use this template.

language = $\langle chinese | english \rangle$

Set what language is used in the document. The default value is chinese.

3.2 Variables setting

There're some commands which are used to set the variables for the thesis.

\title \title{\title\}
Set title.

\author \author{\author\}
Set author.

\major \major{\major\}
Set your major.

\department \department{\department\}
Set your department.

\division \division{\division\}
Set your research division.

\supervisor \supervisor{\supervisor\}
Set your supervisor.

3.3 Other commands

```
\maketitle \maketitle is used to create the title.
\bibliography \bibliography{\langle.bib file\rangle}

Used to create bibliography page.
```

\TurnOffTabFontSetting \TurnOnTabFontSetting

This template has set the font size and line spread for all the tables which makes it's impossible to change font format temporary in one table. So it provides these to command to temporary disable or enable default font setting in table. For example, if you want to change table font size, you can use the code like this:

\email

\email{\langle Email Address\rangle}

A command to display email address. For example, \email{name@example.com} would look like this: name@example.com.

4 example

Below is a example of using this template.

```
1 \documentclass[language=english]{hustproposal}
2
3 \department{your department}
4 \title{your title}
5 \author{your name}
6 \major{your major}
7 \division{your research division}
8 \supervisor{your supervisor}
```

```
begin{document}

maketitle

vection{Research Motivation}

section{Related Work}

section{Research Objective}

section{Research Plan}

section{Schedule}

bibliography{.bib file}

end{document}
```

5 Introduction to some packages used in the template

Here's a list of some packages used in the template.

- algorithm2e For display algorithm.
- enumitem For set the style of enumerate, itemize and description environment.
- fancynum Display the really big number.
- listings For display the highlighted code. If you need better quality, use the package minted.
- longtable Create a very long table.
- Itxtable Combine the features of longtable and tabularx.
- multirow Combine multi-rows in table.
- overpic Put something over a picture,
- tabularx A better table environment.

IV Implementation

```
1 %<*class>
2 \RequirePackage{ifthen}
```

1 Process Options

Use xkeyval to process options.

```
3 \RequirePackage{xkeyval}
    Option language.
4 \gdef\HUST@language{chinese}
5 \DeclareOptionX{language}[chinese]{
    \ifthenelse{\equal{#1}{chinese} \OR \equal{#1}{english}}{
      \gdef\HUST@language{#1}
    }{
      \ClassError{hustproposal}
      {Option language can only be 'chinese' or 'english'}
      {Try to remove option language^^J}
    }
13 }
    Process options and load class article.
14 \DeclareOption*{\PassOptionsToClass{\CurrentOption}{article}}
15 \ProcessOptionsX
16 \LoadClass[12pt, a4paper]{article}
```

2 Check Engine

Check engine, only X_HET_EX and LuaET_EX are supported.

3 Font Setting

Set font used in document. Firstly, it's font setting for English font under english mode. We use fontspec package to handle font. We choose Tex Gyre Termes, Droid Sans and CMU Typewriter Text as document main font, sans font and mono font.

```
\ifthenelse{\equal{\HUST@language}{english}}{
      \RequirePackage{fontspec}
      \setmainfont[
        Ligatures={Common,TeX},
35
        Extension=.otf,
36
        UprightFont=*-regular,
        BoldFont=*-bold,
38
        ItalicFont=*-italic,
        BoldItalicFont=*-bolditalic] {texgyretermes}
40
      \setsansfont[Ligatures={Common,TeX}]{Droid Sans}
41
      \setmonofont{CMU Typewriter Text}
42
      \defaultfontfeatures{Mapping=tex-text}
43
```

Now let's set the Chinese font commands into empty, when document is under english mode.

```
44  \let\HEI\relax
45  \let\KAI\relax
46  \let\FANGSONG\relax
47  \newcommand{\hei}[1]{#1}
48  \newcommand{\kai}[1]{#1}
49  \newcommand{\fangsong}[1]{#1}
50 }{}
```

Below is the font setting under chinese mode. We chooses the same English font as under english mode. We use <code>xecjk</code> package (for X¬ILTEX) or <code>luatex-ja</code> package (for LuaLTEX, recommend) to handle Chinese font. We will use font: AdobeSongStd-Light, AdobeKaitiStd-Regular, AdobeHeitiStd-Regular and AdobeFangsongStd-Regular.

```
\ifXeTeX
                           % XeTeX 下使用 fontspec + xeCJK 处理字体
                   % 英文字体
          53
                   \RequirePackage{fontspec}
                   \RequirePackage{xunicode}
          55
                   \setmainfont[
          56
                     Ligatures={Common, TeX},
                     Extension=.otf,
          58
                     UprightFont=*-regular,
          59
                     BoldFont=*-bold,
          60
                     ItalicFont=*-italic,
                     BoldItalicFont=*-bolditalic]{texgyretermes}
                   \setsansfont[Ligatures={Common,TeX}]{Droid Sans}
                   \setmonofont{CMU Typewriter Text}
          64
                   \defaultfontfeatures{Mapping=tex-text}
          65
                   % 中文字体
          66
                   \RequirePackage[CJKmath] {xeCJK}
          67
                   \setCJKmainfont[
          68
                    BoldFont={Adobe Heiti Std},
          69
                    ItalicFont={Adobe Kaiti Std}]{Adobe Song Std}
          70
                   \setCJKsansfont{Adobe Kaiti Std}
                   \setCJKmonofont{Adobe Fangsong Std}
                   \xeCJKsetup{PunctStyle=kaiming}
          73
          74
                   \newcommand\ziju[2]{{\renewcommand{\CJKglue}{\hskip #1} #2}}
          75
     \HEI
                   \newCJKfontfamily\HEI{Adobe Heiti Std}
           (End definition for \HEI. This function is documented on page 8.)
     \KAI
                   \newCJKfontfamily\KAI{Adobe Kaiti Std}
           (End definition for \KAI. This function is documented on page 8.)
\FANGSONG
                   \newCJKfontfamily\FANGSONG{Adobe Fangsong Std}
          78
           (End definition for \FANGSONG. This function is documented on page 8.)
     \hei
                   \newcommand{\hei}[1]{{\HEI #1}}
```

\ifthenelse{\equal{\HUST@language}{chinese}}{

```
(End definition for \hei. This function is documented on page 8.)
     \kai
                    \mbox{\newcommand}(\ai)[1]{{\KAI #1}}
           (End definition for \kai. This function is documented on page 8.)
\fangsong
                    \newcommand{\fangsong}[1]{{\FANGSONG #1}}
           (End definition for \fangsong. This function is documented on page 8.)
                 \else\fi
                 \ifLuaTeX % LuaTeX 下使用 luatex-ja 处理字体 [推荐]
                    \RequirePackage{luatexja-fontspec}
          84
                    % 英文字体
          25
                    \setmainfont[Ligatures={Common, TeX}]{Tex Gyre Termes}
          86
                    \setsansfont[Ligatures={Common,TeX}]{Droid Sans}
                    \setmonofont{CMU Typewriter Text}
                    \defaultfontfeatures{Mapping=tex-text,Scale=MatchLowercase}
                    % 中文字体
          90
                    \setmainjfont[
          91
                    BoldFont={AdobeHeitiStd-Regular},
          92
                     ItalicFont={AdobeKaitiStd-Regular}] {AdobeSongStd-Light}
                    \setsansjfont{AdobeKaitiStd-Regular}
          94
                    \defaultjfontfeatures{JFM=kaiming}
          95
          96
                    \newcommand\ziju[2]{\vbox{\ltjsetparameter{kanjiskip=#1} #2}}
     \HEI
                    \newjfontfamily\HEI{AdobeHeitiStd-Regular}
           (End definition for \HEI. This function is documented on page 8.)
     \KAI
                    \newjfontfamily\KAI{AdobeKaitiStd-Regular}
           (End definition for \KAI. This function is documented on page 8.)
\FANGSONG
                    \newjfontfamily\FANGSONG{AdobeFangsongStd-Regular}
           (End definition for \FANGSONG. This function is documented on page 8.)
     \hei
                    \newcommand{\hei}[1]{{\jfontspec{AdobeHeitiStd-Regular} #1}}
         101
```

```
(End definition for \hei. This function is documented on page 8.)
     \kai
                   \newcommand{\kai}[1]{{\jfontspec{AdobeKaitiStd-Regular} #1}}
         102
           (End definition for \kai. This function is documented on page 8.)
\fangsong
                   \newcommand{\fangsong}[1]{{\jfontspec{AdobeFangsongStd-Regular} #1}}
           (End definition for \fangsong. This function is documented on page 8.)
                 \else\fi
         104
               Generate Chinese number using zhnumber.
                 \RequirePackage{zhnumber}
          105
                 \def\CJKnumber#1{\zhnumber{#1}} % 兼容 CJKnumb
         107 }{}
                Basic Format
           4
               We set global line spread to 1.3.
         108 \linespread{1.3}\selectfont
               Use geometry package to handle paper page.
         109 \RequirePackage{geometry}
            \geometry{
               top=1.77in,
         111
               bottom=1.1in,
         112
               left=1.1in,
               right=1.1in,
               includefoot
          115
         116 }
            \pagewidth=\paperwidth
         118 \pageheight=\paperheight
               Indent of paragraph and skip between paragraphs.
         119 \RequirePackage{indentfirst}
         120 \setlength{\parindent}{2em}
         121 \setlength{\parskip}{Opt plus 2pt minus 1pt}
               Packages to handle color.
         122 \RequirePackage{color}
         123 \RequirePackage[table]{xcolor}
```

Use hyperref package to generate cross-reference link.

```
124 \RequirePackage[unicode]{hyperref}
   \hypersetup{
     bookmarksnumbered=true,
126
     bookmarksopen=true,
127
     bookmarksopenlevel=1,
128
     breaklinks=true,
     colorlinks=true,
130
     allcolors=black,
131
     linktoc=all,
132
     plainpages=false,
133
     pdfpagelabels=true,
     pdfstartview={XYZ null null 1},
135
     pdfinfo={Template.Info={hustproposal.cls v1.0 2014/07/01, Copyright (C) 2013-2014
136
137 }
```

5 Load Packages

Load packages for math.

```
\RequirePackage{amsmath,amssymb,amsfonts}
\RequirePackage[amsmath,amsthm,thmmarks,hyperref,thref]{ntheorem}
140 \RequirePackage{fancynum}
141 \setfnumgsym{\,}
142 \RequirePackage[lined,boxed,linesnumbered,ruled,vlined]{algorithm2e}
     Load packages for picture.
143 \RequirePackage{overpic}
  \RequirePackage{graphicx,caption,subcaption}
     Load packages for table.
145 \RequirePackage{array}
146 \RequirePackage{multirow,tabularx,ltxtable}
     Load package for code highlight. Here we use listings to highlight the
 code. But if you need more features, use minted.
147 \RequirePackage{listings}
     Load package for bibliography cite style.
148 \RequirePackage[numbers,square,comma,super,sort&compress]{natbib}
     Other packages for style setting.
149 \RequirePackage{titlesec}
150 \RequirePackage{titletoc}
```

```
\RequirePackage{tocvsec2}
\RequirePackage[inline]{enumitem}
\RequirePackage{fancyhdr}
\RequirePackage{afterpage}
\RequirePackage{datenumber}
\RequirePackage{etoolbox}
\RequirePackage{appendix}
\RequirePackage[titles]{tocloft}
\RequirePackage{xstring}
\RequirePackage{perpage}
```

6 Variables Setting

```
\title Commands to set the title.
            \def\title#1{\gdef\HUST@title{#1}\hypersetup{pdftitle={#1}}}
            162 \title{}
              (End definition for \title. This function is documented on page 11.)
    \author Commands to set the author.
            \def\author#1{\gdef\HUST@author{#1}\hypersetup{pdfauthor={#1}}}
            164 \author{}
              (End definition for \author. This function is documented on page 11.)
\department Commands to set the department.
            \def\department#1{\gdef\HUST@department{#1}}
            166 \department{}
              (End definition for \department. This function is documented on page 11.)
     \major Commands to set the major.
            167 \def\major#1{\gdef\HUST@major{#1}}
            168 \major{}
              (End definition for \major. This function is documented on page 11.)
  \division Commands to set the division.
            169 \def\division#1{\gdef\HUST@division{#1}}
            170 \division{}
              (End definition for \division. This function is documented on page 11.)
```

\supervisor Commands to set the supervisor.

```
171 \ifthenelse{\equal{\HUST@language}{english}}{
172     \def\supervisor#1{\gdef\HUST@supervisor{#1}}
173    \supervisor{}
174 }{
175     \def\supervisor#1#2{
176      \gdef\HUST@supervisor{#1}
177      \gdef\HUST@supervisortitle{#2}
178     }
179     \supervisor{}{}
180 }
```

(End definition for \supervisor. This function is documented on page 11.)

7 Localization

Chinese localization. ²

```
\ifthenelse{\equal{\HUST@language}{chinese}}{
      \def\indexname{索引}
      \def\figurename{图}
183
      \def\tablename{表}
184
      \AtBeginDocument{\def\listingscaption{代码}}
185
      \def\refname{参考文献}
186
      \def\contentsname{目录}
187
      \def\appendixname{附录}
188
      \def\listfigurename{插图索引}
189
      \def\listtablename{表格索引}
      \def\equationautorefname{公式}
      \def\footnoteautorefname{脚注}
192
      \def\itemautorefname~#1\null{第~#1~项\null}
      \def\figureautorefname{图}
194
      \def\tableautorefname{表}
      \def\appendixautorefname{附录}
196
      \expandafter\def\csname\appendixname autorefname\endcsname{\appendixname}
197
      \def\sectionautorefname~#1\null{#1~小节\null}
198
      \def\subsectionautorefname~#1\null{#1~小节\null}
199
      \def\subsubsectionautorefname~#1\null{#1~/\节\null}
      \def\FancyVerbLineautorefname~#1\null{第~#1~行\null}
201
      \def\pageautorefname~#1\null{第~#1~页\null}
202
```

²The autorefname Reference:http://tex.stackexchange.com/questions/52410/how-to-use-the-command-autoref-to-implement-the-same-effect-when-use-the-comman

```
\def\lstlistingautorefname{代码}
       \def\definitionautorefname{定义}
       \def\propositionautorefname{命题}
205
       \def\lemmaautorefname{引理}
206
       \def\theoremautorefname{定理}
207
       \def\axiomautorefname{公理}
208
       \def\corollaryautorefname{推论}
       \def\exerciseautorefname{练习}
210
       \def\exampleautorefname{例}
211
       \def\proofautorefname{证明}
212
       \SetAlgorithmName{算法}{算法}{算法索引}
       \SetAlgoProcName{过程}{过程}
       \SetAlgoFuncName{函数}{函数}
215
       \def\AlgoLineautorefname~#1\null{第~#1~行\null}
216
217 }{}
     English localization.
  \ifthenelse{\equal{\HUST@language}{chinese}}{}{
       \def\equationautorefname{Equation}
       \def\footnoteautorefname{Footnote}
220
       \def\itemautorefname{Item}
221
       \def\figureautorefname{Figure}
       \def\tableautorefname{Table}
223
       \def\appendixautorefname{Appendix}
       \expandafter\def\csname\appendixname autorefname\endcsname{\appendixname}
225
       \def\sectionautorefname{Section}
226
       \def\subsectionautorefname{Subsection}
227
       \def\subsubsectionautorefname{Sub-subsection}
228
       \def\FancyVerbLineautorefname{Line}
229
       \def\pageautorefname{Page}
230
       \def\lstlistingautorefname{Code Fragment}
231
       \def\definitionautorefname{Definition}
       \def\propositionautorefname{Proposition}
       \def\lemmaautorefname{Lemma}
234
       \def\theoremautorefname{Theorem}
235
       \def\axiomautorefname{Axiom}
236
       \def\corollaryautorefname{Corollary}
237
       \def\exerciseautorefname{Exercise}
238
       \def\exampleautorefname{Example}
239
       \def\proofautorefname{Proof}
240
       \SetAlgorithmName{Algorithm}{Algorithm}{List of Algorithms}
241
       \SetAlgoProcName{Procedure}{Procedure}
242
```

```
\SetAlgoFuncName{Function}{Function}
      \def\AlgoLineautorefname{Line}
245 }
     Internal variables.
   \ifthenelse{\equal{\HUST@language}{chinese}}{
      \def\HUST@maintitle{毕业设计(论文)开题报告}
2/17
      \def\HUST@departmenttitle{学院(系):}
248
      \def\HUST@titletitle{毕业设计(论文)题目: }
249
      \def\HUST@authortitle{学生姓名: }
      \def\HUST@majortitle{专业:}
251
      \def\HUST@divisiontitle{所属教研室名称: }
252
      \def\HUST@supervisorentrytitle{指导教师: }
253
      \def\HUST@supervisortitleentrytitle{专业技术职称:}
  }{
255
      \def\HUST@maintitle{Final Year Project Proposal}
256
      \def\HUST@departmenttitle{Department:}
257
      \def\HUST@titletitle{Title:}
258
      \def\HUST@authortitle{Student Name:}
259
      \def\HUST@majortitle{Major:}
      \def\HUST@divisiontitle{Research Division:}
261
      \def\HUST@supervisorentrytitle{Supervisor:}
262
263
  \hypersetup{pdfsubject={\HUST@maintitle}}
```

8 Style Setting

8.1 Equation Style

Allow long equation breaking between lines or pages.

```
265 \allowdisplaybreaks[4]
```

Set skip between equation and context.

```
266 \abovedisplayskip=10bp plus 2bp minus 2bp
267 \abovedisplayshortskip=10bp plus 2bp minus 2bp
268 \belowdisplayskip=\abovedisplayskip
269 \belowdisplayshortskip=\abovedisplayshortskip
Set equation numbering style.
270 \numberwithin{equation}{section}
```

8.2 Theorem Style

We use amsthm to handle the proof environment and use ntheorem to handle other theorem environments.

```
271 \theoremnumbering{arabic}
  \ifthenelse{\equal{\HUST@language}{chinese}}{
     \theoremseparator{: }
274 }{
     \theoremseparator{:}
276 }
  \theorempreskip{1.2ex plus 0ex minus 1ex}
   \theorempostskip{1.2ex plus 0ex minus 1ex}
   \theoremheaderfont{\normalfont\bfseries\HEI}
   \theoremsymbol{}
281
   \theoremstyle{definition}
   \theorembodyfont{\normalfont}
   \ifthenelse{\equal{\HUST@language}{chinese}}{
     \newtheorem{definition}{定义}
286 }{
     \newtheorem{definition}{Definition}
287
  }
288
289
   \theoremstyle{plain}
   \theorembodyfont{\itshape}
   \ifthenelse{\equal{\HUST@language}{chinese}}{
     \newtheorem{proposition}{命题}
293
     \newtheorem{lemma}{引理}
     \newtheorem{theorem}{定理}
295
     \newtheorem{axiom}{公理}
296
     \newtheorem{corollary}{推论}
297
     \newtheorem{exercise}{练习}
298
     \newtheorem{example}{例}
     \def\proofname{\hei{证明}}
300
301 }{
     \newtheorem{proposition}{Proposition}
302
     \newtheorem{lemma}{Lemma}
303
     \newtheorem{theorem}{Theorem}
     \newtheorem{axiom}{Axiom}
305
     \newtheorem{corollary}{Corollary}
306
     \newtheorem{exercise}{Exercise}
307
```

```
308 \newtheorem{example}{Example}
309 \def\proofname{\textbf{Proof}}
310 }
```

8.3 Floating Objects Style

Set the skip to the context for floating object with argument 'h'.

\setlength{\intextsep}{0.7\baselineskip plus 0.1\baselineskip minus 0.1\baselineskip Set the skip to the context for top or bottom floating object.

```
\setlength{\textfloatsep}{0.8\baselineskip plus 0.1\baselineskip mi-
nus 0.2\baselineskip}
```

Set the fraction of floating object. Make the fraction less crowded than default value to prevent floating object occupying too much space.

```
313 \renewcommand{\textfraction}{0.15}
314 \renewcommand{\textfraction}{0.85}
315 \renewcommand{\bottomfraction}{0.65}
316 \renewcommand{\floatpagefraction}{0.60}
```

8.4 Table Style

\tabincell A command make it easier to insert a new table into an existing cell.

(End definition for \tabincell. This function is documented on page ??.)

```
318 \def\@cline#1-#2\@nil{%
     \omit
319
     \@multicnt#1%
320
     \advance\@multispan\m@ne
321
     \ifnum\@multicnt=\@ne\@firstofone{&\omit}\fi
322
     \@multicnt#2%
323
     \advance\@multicnt-#1%
324
     \advance\@multispan\@ne
325
     \leaders\hrule\@height\arrayrulewidth\hfill
     \cr
327
     \noalign{\nobreak\vskip-\arrayrulewidth}}
328
```

³Reference:http://tex.stackexchange.com/questions/52100/longtable-multirow-problem-with-cline-and-nopagebreak

Here we set the global font setting (font size: 11pt and line spread: 1.4) for tables. But first we will declare a variable to determine whether table global font setting is activated.

```
329 \newif\ifHUST@useoldtabular
330 \HUST@useoldtabularfalse
```

OffTabFontSetting Use \TurnOffTabFontSetting to deactivate global font setting.

```
331 \def\TurnOffTabFontSetting{\HUST@useoldtabulartrue}
```

(End definition for \TurnOffTabFontSetting. This function is documented on page 12.)

nOnTabFontSetting Use \TurnOnTabFontSetting to activate global font setting.

```
332 \def\TurnOnTabFontSetting{\HUST@useoldtabularfalse}
```

(End definition for \TurnOnTabFontSetting. This function is documented on page 12.)

Hook the tabular, tabularx and longtable environment to imply the global font setting.

```
333 \AtBeginEnvironment{tabular}{
     \ifHUST@useoldtabular\else
       \fontsize{11pt}{15.4pt}\selectfont
335
     \fi
336
337 }
  \AtBeginEnvironment{tabularx}{
338
     \ifHUST@useoldtabular\else
339
       \fontsize{11pt}{15.4pt}\selectfont
340
     \fi
341
342 }
   \AtBeginEnvironment{longtable}{
     \ifHUST@useoldtabular\else
344
       \fontsize{11pt}{15.4pt}\selectfont
345
     \fi
347 }
```

8.5 Caption Style

Set caption font size as 11pt, use hang format, remove ':' after number and set the skip between context as 12pt.

```
348 \DeclareCaptionFont{HUST@captionfont}{\fontsize{11pt}{14.3pt}\selectfont}
349 \DeclareCaptionLabelFormat{HUST@caplabel}{#1~#2}
350 \captionsetup{
351 font=HUST@captionfont,
352 labelformat=HUST@caplabel,
```

```
format=hang,
labelsep=quad,
skip=12pt
state
```

8.6 Code Highlight Style

```
\definecolor{HUST@lstgreen}{rgb}{0,0.6,0}
   \definecolor{HUST@lstmauve}{rgb}{0.58,0,0.82}
  \lstset{
360
     basicstyle=\footnotesize\ttfamily\linespread{1}\selectfont\FANGSONG,
361
     keywordstyle=\color{blue}\bfseries,
362
     commentstyle=\color{HUST@lstgreen}\itshape\KAI,
363
     stringstyle=\color{HUST@lstmauve},
364
     showspaces=false,
     showstringspaces=false,
366
     showtabs=false,
367
     numbers=left,
368
     numberstyle=\tiny\color{black},
369
     frame=lines,
     rulecolor=\color{black},
371
     breaklines=true
372
373 }
```

8.7 Section Title Style

Set the numbering depth for section.

```
374 \setcounter{secnumdepth}{3}
```

Section tilte format and spacing setting.

Subsubsection tilte format and spacing setting.

```
$^{384} $$ \textbf{(Subsubsection)_{0pt}_{12pt}_{16.9pt}\
```

8.8 Head & Foot Style

```
386 \let\ps@plain\ps@fancy
387 \pagestyle{fancy}
388 \fancyhf{}
389 \renewcommand{\headrulewidth}{0pt}
390 \renewcommand{\footrulewidth}{0pt}
391 \fancyfoot[C]{\thepage}
```

8.9 List Environment Style

```
392 \setlist{noitemsep,partopsep=0pt,topsep=.8ex}
393 \setlist[1]{labelindent=\parindent}
394 \setlist[enumerate,1]{label=\arabic*.,ref=\arabic*}
395 \setlist[enumerate,2]{label*=\arabic*,ref=\theenumi.\arabic*}
396 \setlist[enumerate,3]{label=\emph{\alph*}),ref=\theenumii\emph{\alph*}}
397 \setlist[description]{font=\bfseries\HEI}
```

8.10 Footnote Style

398 \MakePerPage{footnote}

9 Specical Page

\maketitle Commands to generate title.

```
399 \let\HUST@oldmaketitle\maketitle
  \def\maketitle{
       \newgeometry{top=1.2in}
401
       \begingroup
402
       \gdef\@title{\HEI\bfseries\HUST@maintitle}
403
       \gdef\@author{}
404
       \gdef\@date{}
       \HUST@oldmaketitle
       \vspace{-3em}\sffamily\KAI\fontsize{13.75pt}{17.9pt}\selectfont
407
       \ifthenelse{\equal{\HUST@language}{chinese}}{
408
           \noindent \HUST@departmenttitle \\
409
           \null\hspace{2em} \HUST@department \par
           \noindent \HUST@titletitle \\
411
           \null\hspace{2em} \HUST@title \par
412
```

```
\noindent \HUST@authortitle \\
           \null\hspace{2em} \HUST@author \par
           \noindent \HUST@majortitle \hspace{.8em}
415
           \ifthenelse{\equal{\HUST@major}{}}{\hspace{5em}}{\HUST@major}
416
           \hspace{3em} \HUST@divisiontitle \hspace{.8em} \HUST@division \par
417
           \noindent \HUST@supervisorentrytitle \hspace{.8em}
418
           \ifthenelse{\equal{\HUST@supervisor}{}}{\hspace{5em}}{\HUST@supervisor}
           \hspace{3em} \HUST@supervisortitleentrytitle \hspace{.8em} \HUST@supervisort
420
       }{
421
           \noindent \HUST@departmenttitle \hspace{.8em} \HUST@department \par
422
           \noindent \HUST@titletitle \hspace{.8em} \HUST@title \par
           \noindent \HUST@authortitle \hspace{.8em} \HUST@author \par
424
           \noindent \HUST@majortitle \hspace{.8em} \HUST@major \par
425
           \noindent \HUST@divisiontitle \hspace{.8em} \HUST@division \par
426
           \noindent \HUST@supervisorentrytitle \hspace{.8em} \HUST@supervisor \par
427
       }
       \endgroup
429
430 }
```

(End definition for \maketitle. This function is documented on page 12.)

\bibliography A command to generate bibliography page. We use thuthesis.bst in thuthesis to typeset bibliography in Chinese language mode. And use IEEEtran in English language mode.

```
431 \ifthenelse{\equal{\HUST@language}{chinese}}{
     \def\thudot{\unskip.}
432
     \def\thumasterbib{[Master Thesis]}
433
     \def\thuphdbib{[Doctor Thesis]}
434
     \bibliographystyle{thuthesis}
435
436 }{
     \bibliographystyle{IEEEtran}
437
  }
438
   \let\HUST@bibliography\bibliography
   \renewcommand\bibsection{}
   \setlength\bibsep{0pt}
   \def\bibliography#1{
442
     \section{\refname}
443
     \ifthenelse{\equal{\HUST@language}{chinese}}{
444
       \HUST@bibliography{#1}
445
     }{
446
       \HUST@bibliography{IEEEabrv,#1}
447
     }
448
```

```
449 }
```

(End definition for \bibliography. This function is documented on page 12.)

10 Other Command

```
\email

450 \def\email#1{

451 \href{mailto:#1}{\texttt{#1}}

452 }

(End definition for \email. This function is documented on page 12.)

453 %</class>
```

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