

A Beamer Template for Huazhong University of Science and Technology: the hustbeamer class *

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I Introduction

This is a beamer 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 `hustbeamer` 目录下的如下文件拷贝到你 $\text{T}_{\text{E}}\text{X}$ 工程根目录下即可：

- `hustbeamer.cls`
- `hust-header.png`

3 基本用法



本文档只能使用 $\text{X}_{\text{E}}\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ 或 $\text{LuaL}_{\text{A}}\text{T}_{\text{E}}\text{X}$ （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]{hustbeamer}
```

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 =  $\langle$ chinese | english $\rangle$ 
```

指定模板语言。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{the title}\title[short title]{long title}
```

设置标题。

```
\author \author{the author}\author[short author]{long author}
```

设置作者名。

```
\date{} % remove date field.
```

```
\date{<content>} % put whatever you want.
\date{<Year>}{<Month>}
\date{<Year>}{<Month>}{<Day>}
```

设置日期。

3.3 其它基本命令

下面来介绍其它基本命令

```
\maketitle \maketitle 和 \makecover 作用相同，用于生成封面。
```

```
\makecover
```

```
\PrintTOC \PrintTOC 用于生成总目录。
```

```
\EnableTOCAtBeginSection
\DisableTOCAtBeginSection
```

本模板会自动在每个小节开头处加入当前索引，使用这两个命令可以开启或关闭该功能。

```
\email \email{<Email 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。

4 简单示例

如下为一个使用本模板的简单示例。更完整的例子请见 `hustbeamer-example.tex` 文件，其效果见 [hustbeamer-example.pdf](#)。

```
1 \documentclass[language=chinese]{hustbeamer}
2
3 \title[短标题]{长标题}
4 \author{作者名}
5 \institute{作者信息}
6 \date{2013}{7}{1}
7
8 \begin{document}
9
10 \maketitle
11 \PrintTOC
12
13 %% 正文
```

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。
- **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。
- **ltxtable** **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。
- **xy-pic** 用于绘制简单图形。如需更高级功能可以使用 **tikz** 宏包。
- **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 <content>}
```

```
\hei {\hei{<content>}}
```

切换字体为黑体 (AdobeHeitiStd-Regular)。

```
\KAI {\KAI <content>}
```

```
\kai {\kai{<content>}}
```

切换字体为楷体 (AdobeKaitiStd-Regular)。

```
\FANGSONG {\FANGSONG <content>}
```

```
\fangsong {\fangsong{<content>}}
```

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 Xe_{La}TeX) 和宏包 **luatex-jafont** (对于 Lua_{La}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 following files from directory `hustbeamer` into your \TeX project root directory.

- `hustbeamer.cls`
- `hust-header.png`

3 Usage



This template can only be compiled by
Xe_{La}TeX or Lua_{La}TeX (Recommend).

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

```
\documentclass[language=english]{hustbeamer}
```

3.1 Option

There's one option available when use this template.

`language` `language = <chinese | english>`

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{<the title>}`
`\title[<short title>]{<long title>}`

Set title.

`\author` `\author{<the author>}`
`\author[<short author>]{<long author>}`

Set author.

`\date` `\date{} % remove date field.`
`\date{<content>} % put whatever you want.`
`\date{<Year>}{<Month>}`
`\date{<Year>}{<Month>}{<Day>}`

Set date.

3.3 Other commands

`\maketitle` `\maketitle` and `\makecover` are the same. Used to create the title page.
`\makecover`

`\PrintTOC` `\PrintTOC` is used to insert the table of contents.

`\EnableTOCAtBeginSection`
`\DisableTOCAtBeginSection`

This template will automatically insert current table of contents in every beginning of section. Use these two commands to enable or disable this feature.

`\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 Simple example

Below is a simple example of using this template. For a complete example see `hustbeamer-example.tex` which will generate `hustbeamer-example.pdf`.

```
1 \documentclass[language=english]{hustbeamer}
2
3 \title[short title]{long title}
4 \author{your name}
5 \institute{your info}
6 \date{2013}{7}{1}
7
8 \begin{document}
9
10 \maketitle
11 \PrintTOC
12
13 %% main body
14
15 \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.
- `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.

- **ltxtable** Combine the features of `longtable` and `tabularx`.
- **multirow** Combine multi-rows in table.
- **overpic** Put something over a picture,
- **tabularx** A better table environment.
- **xy-pic** To draw some picture. If you need more advanced features, use the package **tikz**.

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]{
6   \ifthenelse{\equal{#1}{chinese} \OR \equal{#1}{english}}{
7     \gdef\HUST@language{#1}
8   }{
9     \ClassError{hustbeamer}
10    {Option language can only be 'chinese' or 'english'}
11    {Try to remove option language^^J}
12  }
13 }
```

Process options and load class beamer.

```
14 \DeclareOption*{\PassOptionsToClass{\CurrentOption}{beamer}}
15 \ProcessOptionsX
16 \LoadClass[12pt,utf8,compress,mathserif,noamsthm,xcolor=table]{beamer}
```

2 Check Engine

Check engine, only Xe^LA^TE^X and Lua^LA^TE^X are supported.

```
17 \RequirePackage{iftex}
18 \ifXeTeX\else
19   \ifLuaTeX\else
20     \begingroup
21       \errorcontextlines=-1\relax
22       \newlinechar=10\relax
23       \errmessage{^^J
24         *****^^J
25         * XeTeX or LuaTeX is required to compile this document.^^J
26         * Sorry!^^J}
```

```

27      *****~J
28      }%
29      \endgroup
30      \fi
31      \fi

```

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.

```

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

```

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 **xecjk** package (for X_YL^AT_EX) or **luatex-j**a package (for Lua^AT_EX, recommend) to handle Chinese font. We will use font: AdobeSongStd-Light, AdobeKaitiStd-Regular, AdobeHeitiStd-Regular and AdobeFangsongStd-Regular.

```

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

```

```

52 \ifXeTeX % XeTeX 下使用 fontspec + xeCJK 处理字体
53 % 英文字体
54 \RequirePackage{fontspec}
55 \RequirePackage{xunicode}
56 \setmainfont[
57     Ligatures={Common,TeX},
58     Extension=.otf,
59     UprightFont=*-regular,
60     BoldFont=*-bold,
61     ItalicFont=*-italic,
62     BoldItalicFont=*-bolditalic]{texgyretermes}
63 \setsansfont[Ligatures={Common,TeX}]{Droid Sans}
64 \setmonofont{CMU Typewriter Text}
65 \defaultfontfeatures{Mapping=tex-text}
66 % 中文字体
67 \RequirePackage[CJKmath]{xeCJK}
68 \setCJKmainfont[
69     BoldFont={Adobe Heiti Std},
70     ItalicFont={Adobe Kaiti Std}]{Adobe Song Std}
71 \setCJKsansfont{Adobe Kaiti Std}
72 \setCJKmonofont{Adobe Fangsong Std}
73 \xeCJKsetup{PunctStyle=kaiming}
74
75 \newcommand\ziju[2]{\renewcommand{\CJKglue}{\hskip #1} #2}}

\HEI
76 \newCJKfontfamily\HEI{Adobe Heiti Std}

\KAI
77 \newCJKfontfamily\KAI{Adobe Kaiti Std}

\FANGSONG
78 \newCJKfontfamily\FANGSONG{Adobe Fangsong Std}

\hei
79 \newcommand{\hei}[1]{\HEI #1}}

\kai
80 \newcommand{\kai}[1]{\KAI #1}}

\fangsong
81 \newcommand{\fangsong}[1]{\FANGSONG #1}}

```

```

82 \else\fi
83 \ifLuaTeX % LuaTeX 下使用 luatex-jā 处理字体 [推荐]
84 \RequirePackage{luatexja-fontspec}
85 % 英文字体
86 \setmainfont[Ligatures={Common,TeX}]{Tex Gyre Termes}
87 \setsansfont[Ligatures={Common,TeX}]{Droid Sans}
88 \setmonofont{CMU Typewriter Text}
89 \defaultfontfeatures{Mapping=tex-text,Scale=MatchLowercase}
90 % 中文字体
91 \setmainfont[
92 BoldFont={AdobeHeitiStd-Regular},
93 ItalicFont={AdobeKaitiStd-Regular}]{AdobeSongStd-Light}
94 \setsansfont{AdobeKaitiStd-Regular}
95 \defaultjfontfeatures{JFM=kaiming}
96
97 \newcommand\ziju[2]{\vbox{\ltjsetparameter{kanjiskip=#1} #2}}

\HEI
98 \newjfontfamily\HEI{AdobeHeitiStd-Regular}

\KAI
99 \newjfontfamily\KAI{AdobeKaitiStd-Regular}

\FANGSONG
100 \newjfontfamily\FANGSONG{AdobeFangsongStd-Regular}

\hei
101 \newcommand{\hei}[1]{\jfontspec{AdobeHeitiStd-Regular} #1}}

\kai
102 \newcommand{\kai}[1]{\jfontspec{AdobeKaitiStd-Regular} #1}}

\fangsong
103 \newcommand{\fangsong}[1]{\jfontspec{AdobeFangsongStd-Regular} #1}}
104 \else\fi

Generate Chinese number using zhnumber.

105 \RequirePackage{zhnumber}
106 \def\CJKnumber#1{\zhnumber{#1}} % 兼容 CJKnumb
107 }{}

```


4 Basic Format

Use **interfaces** package to handle font size and line spread. We set global line spread to 1.2.

```
108 \RequirePackage{interfaces-Latex}
109 \changefont{linespread=1.2}
```

Papaer setting.

```
110 \pdfpagewidth=\paperwidth
111 \pdfpageheight=\paperheight
```

Indent of paragraph and skip between paragraphs.

```
112 \RequirePackage[indentfirst]
113 \setlength{\parindent}{2em}
114 \setlength{\parskip}{0pt plus 2pt minus 1pt}
```

Use **hyperref** package to generate cross-reference link.

```
115 \RequirePackage[unicode]{hyperref}
116 \definecolor{HUST@hyperreflinkred}{RGB}{128,23,31}
117 \hypersetup{
118   bookmarksnumbered=true,
119   bookmarksopen=true,
120   bookmarksopenlevel=2,
121   colorlinks=true,
122   allcolors=HUST@hyperreflinkred,
123   plainpages=false,
124   pdfpagelabels=true,
125   pdfpagemode={FullScreen},
126   pdfinfo={Template.Info={hustbeamer.cls v1.0 2013/07/01, Copyright (C) 2013 by Xu C
tbeamer}}
127 }
```

5 Load Packages

Load packages for math.

```
128 \RequirePackage{amsmath,amssymb,amsfonts}
129 \RequirePackage[amsmath,amsthm,hyperref,thref]{ntheorem}
130 \RequirePackage{fancyenum}
131 \setfnumgsym{\,,}
132 \RequirePackage[lined,boxed,linesnumbered,ruled,vlined]{algorithm2e}
```

Load packages for picture.

```
133 \RequirePackage[all]{xy}
134 \RequirePackage{overpic}
135 \RequirePackage{graphicx,caption,subcaption}
136 \RequirePackage{pgf,pgfarrows,pgfnodes,pgfautomata,pgfheaps,pgfshade}
```

Load packages for table.

```
137 \RequirePackage{array}
138 \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**.

```
139 \RequirePackage{listings}
```

Load package for bibliography cite style.

```
140 \RequirePackage[numbers,square,comma,sort&compress]{natbib}
```

Other packages for style setting.

```
141 \RequirePackage{datenumner}
142 \RequirePackage{etoolbox}
```

6 Variables Setting

\title A command to set the title.

```
143 \let\HUST@oldtitle\title
144 \DeclareDocumentCommand\title{o m}
145 {
146   \IfNoValueTF{#1}{
147     \HUST@oldtitle{#2}
148   }{
149     \HUST@oldtitle[#1]{#2}
150   }
151   \hypersetup{pdftitle={#2}}
152 }
153 \title{}
```

\author A command to set the author.

```
154 \let\HUST@oldauthor\author
155 \DeclareDocumentCommand\author{o m}
156 {
157   \IfNoValueTF{#1}{
158     \HUST@oldauthor{#2}
159   }{
```

```

160     \HUST@oldauthor[#1]{#2}
161   }
162   \hypersetup{pdfauthor={#2}}
163 }
164 \author{}

```

\date A command to set the date.

```

165 \let\HUST@olddate\date
166 \DeclareDocumentCommand\date{m g g}
167 {
168   \IfNoValueTF{#2}{
169     \HUST@date{#1} % only one argument
170   }{
171     \IfNoValueTF{#3}{ % two arguments
172       \setdate{#1}{#2}{1}
173       \ifthenelse{\equal{\HUST@language}{chinese}}{
174         \HUST@olddate{~\thedateyear~年~\thedatemonth~月}
175       }{
176         \HUST@olddate{\datemonthname~\thedateyear}
177       }
178     }{ % three arguments
179       \setdate{#1}{#2}{#3}
180       \ifthenelse{\equal{\HUST@language}{chinese}}{
181         \HUST@olddate{~\thedateyear~年~\thedatemonth~月~\thedateday~
182           日}
183       }{
184         \HUST@olddate{\datedate}
185       }
186     }
187   }
188   \setdatetoday
189   \date{\thedateyear}{\thedatemonth}{\thedateday}

```

7 Localization

Chinese localization.²

```

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

```

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

```

191 \def\indexname{索引}
192 \def\figurename{图}
193 \def\tablename{表}
194 \def\listingscaption{代码}
195 \def\refname{参考文献}
196 \def\contentsname{目录}
197 \def\equationautorefname{公式}
198 \def\footnoteautorefname{脚注}
199 \def\itemautorefname~#1\null{第~#1~项\null}
200 \def\figureautorefname{图}
201 \def\tableautorefname{表}
202 \def\sectionautorefname~#1\null{#1~小节\null}
203 \def\subsectionautorefname~#1\null{#1~小节\null}
204 \def\subsubsectionautorefname~#1\null{#1~小节\null}
205 \def\FancyVerbLineautorefname~#1\null{第~#1~行\null}
206 \def\pageautorefname~#1\null{第~#1~页\null}
207 \def\lstlistingautorefname{代码}
208 \def\definitionautorefname{定义}
209 \def\propositionautorefname{命题}
210 \def\lemmaautorefname{引理}
211 \def\theoremautorefname{定理}
212 \def\axiomautorefname{公理}
213 \def\corollaryautorefname{推论}
214 \def\exerciseautorefname{练习}
215 \def\exampleautorefname{例}
216 \def\proofautorefname{证明}
217 \SetAlgorithmName{算法}{算法}{算法索引}
218 \SetAlgoProcName{过程}{过程}
219 \SetAlgoFuncName{函数}{函数}
220 \def\AlgoLineautorefname~#1\null{第~#1~行\null}
221 }{}

```

English localization.

```

222 \ifthenelse{\equal{\HUST@language}{english}}{
223 \def\contentsname{Contents}
224 \def\equationautorefname{Equation}
225 \def\footnoteautorefname{Footnote}
226 \def\itemautorefname{Item}
227 \def\figureautorefname{Figure}
228 \def\tableautorefname{Table}
229 \def\sectionautorefname{Section}
230 \def\subsectionautorefname{Subsection}

```

```

231 \def\subsubsectionautorefname{Sub-subsection}
232 \def\FancyVerbLineautorefname{Line}
233 \def\pageautorefname{Page}
234 \def\lstlistingautorefname{Code Fragment}
235 \def\definitionautorefname{Definition}
236 \def\propositionautorefname{Proposition}
237 \def\lemmaautorefname{Lemma}
238 \def\theoremautorefname{Theorem}
239 \def\axiomautorefname{Axiom}
240 \def\corollaryautorefname{Corollary}
241 \def\exerciseautorefname{Exercise}
242 \def\exampleautorefname{Example}
243 \def\proofautorefname{Proof}
244 \SetAlgorithmName{Algorithm}{Algorithm}{List of Algorithms}
245 \SetAlgoProcName{Procedure}{Procedure}
246 \SetAlgoFuncName{Function}{Function}
247 \def\AlgoLineautorefname{Line}
248 }{}

```

8 Style Setting

8.1 Beamer Style

```

249 \usetheme{Rochester}
250 \pgfdeclareimage[width=1.0\paperwidth]{hust-header}{hust-header.png}
251 \setbeamertemplate{itemize items}[ball]
252 \setbeamertemplate{enumerate items}[default]
253 \setbeamertemplate{blocks}[rounded][shadow=true]
254 \setbeamercovered{transparent}
255 \beamer@headheight=0.13\paperwidth
256 \definecolor{HUST@orange}{rgb}{0.96,0.5,0.04}
257 \definecolor{HUST@gray}{rgb}{0.40625,0.40625,0.40625}
258 \definecolor{HUST@lightgray}{rgb}{0.93,0.93,0.93}
259 \definecolor{HUST@blue}{rgb}{0.137,0.43,0.684}
260 \setbeamercolor*{Title bar}{fg=white}
261 \setbeamercolor*{Location bar}{fg=HUST@orange,bg=HUST@lightgray}
262 \setbeamercolor*{frametitle}{parent=Title bar}
263 \setbeamercolor*{block title}{bg=HUST@blue,fg=white}
264 \setbeamercolor*{block body}{bg=HUST@lightgray,fg=HUST@gray}
265 \setbeamercolor*{normal text}{bg=white,fg=HUST@gray}
266 \setbeamercolor*{section in head/foot}{bg=HUST@blue,fg=white}

```

```

267 \usecolortheme[named=HUST@orange]{structure}
268 \setbeamerfont{date}{size=\scriptsize,parent=structure}
269 \setbeamerfont{section in head/foot}{size=\tiny,series=\normalfont}
270 \setbeamerfont{frametitle}{size=\Large,series=\bfseries\HEI}
271 \setbeamertemplate{section in toc}[sections numbered]
272 \setbeamertemplate{subsection in toc}[subsections numbered]
273 \setbeamertemplate{navigation symbols}{}
274 \setbeamertemplate{frametitle}
275 {
276   \vskip-0.25\beamer@headheight
277   \vskip-\baselineskip
278   \vskip-0.2cm
279   \hskip0.7cm\usebeamerfont*{frametitle}\insertframetitle
280   \vskip-0.10em
281   \hskip0.7cm\usebeamerfont*{framesubtitle}\insertframesubtitle
282 }
283 \setbeamertemplate{headline}
284 {
285   \pgfuseimage{hust-header}
286   \vskip -1.95cm
287   \linethickness{0pt}
288
289   \framelate{
290     \begin{beamercolorbox}[wd=\paperwidth,ht=0.3\beamer@headheight]{Title bar}
291       \usebeamerfont{section in head/foot}%
292       \insertsectionnavigationhorizontal{0pt}{\hskip0.22cm}{}%
293     \end{beamercolorbox}}
294
295   \framelate{
296     \begin{beamercolorbox}[wd=\paperwidth,ht=0.7\beamer@headheight]{Title bar}
297     \end{beamercolorbox}}
298 }
299 \setbeamertemplate{footline}
300 {
301   \linethickness{0pt}
302   \framelate{
303     \begin{beamercolorbox}[leftskip=.3cm,wd=\paperwidth,ht=0.3\beamer@headheight,sep=0
304       \usebeamerfont{section in head/foot}%
305       \insertshortauthor~|~\insertshorttitle
306       \hfill
307       \insertframenumber/\inserttotalframenumber

```

```

308 \end{beamercolorbox}}
309 }

```

8.2 Equation Style

Allow long equation breaking between lines or pages.

```

310 \allowdisplaybreaks[4]

    Set skip between equation and context.

311 \abovedisplayskip=10bp plus 2bp minus 2bp
312 \abovedisplayshortskip=10bp plus 2bp minus 2bp
313 \belowdisplayskip=\abovedisplayskip
314 \belowdisplayshortskip=\abovedisplayshortskip

    Set equation numbering style.

315 \numberwithin{equation}{section}

```

8.3 Theorem Style

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

```

316 \theoremnumbering{arabic}
317 \ifthenelse{\equal{\HUST@language}{chinese}}{
318   \theoremseparator{: }
319 }{
320   \theoremseparator{:}
321 }
322 \theorempreskip{1.2ex plus 0ex minus 1ex}
323 \theorempostskip{1.2ex plus 0ex minus 1ex}
324 \theoremheaderfont{\normalfont\bfseries\HEI}
325 \theoremsymbol{}
326
327 \theoremstyle{definition}
328 \theorembodyfont{\normalfont}
329 \ifthenelse{\equal{\HUST@language}{chinese}}{
330   \newtheorem{definition}{定义}[section]
331 }{
332   \newtheorem{definition}{Definition}[section]
333 }
334
335 \theoremstyle{plain}
336 \theorembodyfont{\itshape}
337 \ifthenelse{\equal{\HUST@language}{chinese}}{

```

```

338 \newtheorem{proposition}{命题}[section]
339 \newtheorem{lemma}{引理}[section]
340 \newtheorem{theorem}{定理}[section]
341 \newtheorem{axiom}{公理}[section]
342 \newtheorem{corollary}{推论}[section]
343 \newtheorem{exercise}{练习}[section]
344 \newtheorem{example}{例}[section]
345 \def\proofname{\hei{证明}}
346 }{
347 \newtheorem{proposition}{Proposition}[section]
348 \newtheorem{lemma}{Lemma}[section]
349 \newtheorem{theorem}{Theorem}[section]
350 \newtheorem{axiom}{Axiom}[section]
351 \newtheorem{corollary}{Corollary}[section]
352 \newtheorem{exercise}{Exercise}[section]
353 \newtheorem{example}{Example}[section]
354 \def\proofname{\textbf{Proof}}
355 }

```

8.4 Floating Objects Style

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

```

356 \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.

```

357 \setlength{\textfloatsep}{0.8\baselineskip plus 0.1\baselineskip minus 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.

```

358 \renewcommand{\textfraction}{0.15}
359 \renewcommand{\topfraction}{0.85}
360 \renewcommand{\bottomfraction}{0.65}
361 \renewcommand{\floatpagefraction}{0.60}

```

8.5 Table Style

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

```

362 \newcommand{\tabincell}[2]{\begin{tabular}{@{}#1@{}}#2\end{tabular}}

```


To prevent `\cline` breaking page in **longtable** environment, use in this way: `\table content*\ \nopagebreak \cline{i-j}`³

```

363 \def\@cline#1-#2\@nil{%
364   \omit
365   \@multicnt#1%
366   \advance\@multispan\m@ne
367   \ifnum\@multicnt=\@ne\@firstofone{&\omit}\fi
368   \@multicnt#2%
369   \advance\@multicnt-#1%
370   \advance\@multispan\@ne
371   \leaders\hrule\@height\arrayrulewidth\hfill
372   \cr
373   \noalign{\nobreak\vskip-\arrayrulewidth}}

```

8.6 Caption Style

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

```

374 \DeclareCaptionFont{HUST@captionfont}{\changeont{size=11pt}}
375 \DeclareCaptionLabelFormat{HUST@caplabel}{#1~#2}
376 \captionsetup{
377   font=HUST@captionfont,
378   labelformat=HUST@caplabel,
379   format=hang,
380   labelsep=quad,
381   skip=12pt
382 }

```

8.7 Code Highlight Style

```

383 \definecolor{HUST@lstgreen}{rgb}{0,0.6,0}
384 \definecolor{HUST@lstmauve}{rgb}{0.58,0,0.82}
385
386 \lstset{
387   basicstyle=\footnotesize\ttfamily\changeont{linespread=1}\FANGSONG,
388   keywordstyle=\color{blue}\bfseries,
389   commentstyle=\color{HUST@lstgreen}\itshape\KAI,
390   stringstyle=\color{HUST@lstmauve},
391   showspaces=false,

```

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

```

392 showstringspaces=false,
393 showtabs=false,
394 numbers=left,
395 numberstyle=\tiny\color{black},
396 frame=lines,
397 rulecolor=\color{black},
398 breaklines=true
399 }

```

8.8 Bibliography Style

We use `thubib.bst` in `thuthesis` to typeset bibliography in Chinese language mode. And use `IEEEtran` in English language mode.

```

400 \ifthenelse{\equal{\HUST@language}{chinese}}{
401   \def\thudot{\unskip.}
402   \def\thumasterbib{[Master Thesis]}
403   \def\thuphdbib{[Doctor Thesis]}
404   \bibliographystyle{thubib}
405 }{
406   \bibliographystyle{IEEEtran}
407   \let\HUST@bibliography\bibliography
408   \def\bibliography#1{\HUST@bibliography{IEEEabrv,#1}}
409 }

```

9 Specical Page

`\maketitle` Commands to generate title page.

```

\makecover 410 \def\maketitle{
411   \let\HUST@oldthepage\thepage
412   \ifthenelse{\equal{\HUST@language}{chinese}}
413   {\def\thepage{封面}}
414   {\def\thepage{Titlepage}}
415   \begingroup
416   \setbeamertemplate{headline}{\pgfuseimage{hust-header}}
417   \setbeamertemplate{footline}
418   {
419     \linethickness{0pt}
420     \framelatex{
421       \begin{beamercolorbox}[leftskip=.3cm,wd=\paperwidth,ht=0.3\beamer@headheight,sep
422       \usebeamerfont{section in head/foot}%
423       \insertshortauthor~|~\insertshorttitle

```

```

424     \hfill
425     \end{beamercolorbox}}
426 }
427 \frame{\titlepage}
428 \endgroup
429 \let\thepage\HUST@oldthepage
430 \setcounter{framenum}{0}
431 }
432 \let\makecover\maketitle

```

\PrintTOC A command to generate table of contents.

```

433 \def\PrintTOC{
434   \begin{frame}{\contentsname}
435   \pdfbookmark{\contentsname}{\contentsname}
436   \tableofcontents[subsubsectionstyle=hide]
437   \end{frame}
438 }

```

Here we set whether insert current table of contents at beginning of section.

```

439 \newif\ifHUST@TOCAtBeginSection
440 \HUST@TOCAtBeginSectiontrue

```

TOCAtBeginSection Use `\EnableTOCAtBeginSection` to enable insert current table of contents at beginning of section.

```

441 \def\EnableTOCAtBeginSection{\HUST@TOCAtBeginSectiontrue}

```

TOCAtBeginSection Use `\DisableTOCAtBeginSection` to disable insert current table of contents at beginning of section.

```

442 \def\DisableTOCAtBeginSection{\HUST@TOCAtBeginSectionfalse}

```

Insert current table of contents at beginning of section.

```

443
444 \AtBeginSection[] {
445   \ifHUST@TOCAtBeginSection
446     \begin{frame}{\secname}
447     \tableofcontents[sectionstyle=show/shaded,subsectionstyle=hide]
448     \end{frame}
449   \else\fi
450 }
451 \AtBeginSubsection[] {
452   \ifHUST@TOCAtBeginSection
453     \begin{frame}{\secname}{\subsecname}

```

```

454 \tableofcontents[sectionstyle=show/hide,subsectionstyle=show/shaded/hide,subsubsec
455 \end{frame}
456 \else\fi
457 }

```

10 Other Command

\email

```

458 \def\email#1{
459 \href{mailto:#1}{\texttt{#1}}
460 }
461 \</class>

```

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