

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

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\*This document corresponds to hustbeamer.cls v1.0, dated 2013/07/01.

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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<sup>1</sup>:
  - 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。

---

<sup>1</sup>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`    `language = <chinese | english>`

---

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](mailto: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。
- **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  $\text{Xe}_{\text{L}}\text{TeX}$ ) 和宏包 **luatex-jafonts** (对于  $\text{Lua}_{\text{L}}\text{TeX}$ ) 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  $\text{\TeX}$  project root directory.

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



## 3 Usage



*This template can only be compiled by  
X<sub>Y</sub>LaTeX or LuaLaTeX (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.

---

<code>language</code>	<code>language = &lt;chinese   english&gt;</code>
-----------------------	---

---

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.

---

<code>\title</code>	<code>\title{&lt;the title&gt;}</code>
<code>\title</code>	<code>\title[&lt;short title&gt;]{&lt;long title&gt;}</code>

---

Set title.

---

<code>\author</code>	<code>\author{&lt;the author&gt;}</code>
<code>\author</code>	<code>\author[&lt;short author&gt;]{&lt;long author&gt;}</code>

---

Set author.

---

<code>\date</code>	<code>\date{} % remove date field.</code>
<code>\date</code>	<code>\date{&lt;content&gt;} % put whatever you want.</code>
<code>\date</code>	<code>\date{&lt;Year&gt;}{&lt;Month&gt;}</code>
<code>\date</code>	<code>\date{&lt;Year&gt;}{&lt;Month&gt;}{&lt;Day&gt;}</code>

---

Set date.

### 3.3 Other commands

---

<code>\maketitle</code>	<code>\maketitle</code> and <code>\makecover</code> are the same. Used to create the title page.
<code>\makecover</code>	

---

---

<code>\PrintTOC</code>	<code>\PrintTOC</code> 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{\textit{Email Address}}`

---

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`.
- `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}
4
5 Option language.
6
7 \gdef\HUST@language{chinese}
8 \DeclareOptionX{language}[chinese]{
9   \ifthenelse{\equal{#1}{chinese} \OR \equal{#1}{english}}{
10     \gdef\HUST@language{#1}
11   }{
12     \ClassError{hustbeamer}
13     {Option language can only be 'chinese' or 'english'}
14     {Try to remove option language^^J}
15   }
16 }
```

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<sup>L</sup>A<sup>T</sup>E<sup>X</sup> and Lua<sup>L</sup>A<sup>T</sup>E<sup>X</sup> 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<sub>Y</sub>LaTeX) or **luatex-jafont** package (for LuaLaTeX, 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-jan 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=3,
121   colorlinks=true,
122   allcolors=HUST@hyperreflinkred,
123   pdfpagemode={FullScreen},
124   pdfinfo={Template.Info={hustbeamer.cls v1.0 2013/07/01, Copyright (C) 2013-2014 by
125 }
```

## 5 Load Packages

Load packages for math.

```
126 \RequirePackage{amsmath,amssymb,amsfonts}
127 \RequirePackage[amsmath,amsthm,hyperref,thref]{ntheorem}
128 \RequirePackage{fancynum}
129 \setfnumgsym{\,}
130 \RequirePackage[lined,boxed,linesnumbered,ruled,vlined,algorithsection]{algorithm2e}
```

Load packages for picture.

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

Load packages for table.

```
135 \RequirePackage{array,tabu}
```

```
136 \RequirePackage{multirow}
```

Load package for code highlight. Here we use **listings** to highlight the code. But if you need more features, use **minted**.

```
137 \RequirePackage{listings}
```

Load package for bibliography cite style.

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

Other packages for style setting.

```
139 \RequirePackage{datenumner}
```

```
140 \RequirePackage{etoolbox}
```

## 6 Variables Setting

**\title** A command to set the title.

```
141 \let\HUST@oldtitle\title
```

```
142 \DeclareDocumentCommand\title{o m}
```

```
143 {
```

```
144   \IfNoValueTF{#1}{
```

```
145     \HUST@oldtitle{#2}
```

```
146   }{
```

```
147     \HUST@oldtitle[#1]{#2}
```

```
148   }
```

```
149   \hypersetup{pdftitle={#2}}
```

```
150 }
```

```
151 \title{}
```

**\author** A command to set the author.

```
152 \let\HUST@oldauthor\author
```

```
153 \DeclareDocumentCommand\author{o +m}
```

```
154 {
```

```
155   \IfNoValueTF{#1}{
```

```
156     \HUST@oldauthor{#2}
```

```
157     \hypersetup{pdfauthor={#2}}
```

```
158   }{
```

```
159     \HUST@oldauthor[#1]{#2}
```

```
160     \hypersetup{pdfauthor={#1}}
```

```
161   }
```

```
162 }
```

```
163 \author{}
```

**\date** A command to set the date.

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

## 7 Localization

Chinese localization. <sup>2</sup>

```
189 \ifthenelse{\equal{\HUST@language}{chinese}}{
190   \def\indexname{索引}
191   \def\figurename{图}
192   \def\tablename{表}
193   \AtBeginDocument{\def\listingscaption{代码}}
```

---

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

```

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

```

English localization.

```

221 \ifthenelse{\equal{\HUST@language}{english}}{
222   \def\contentsname{Contents}
223   \def\equationautorefname{Equation}
224   \def\footnoteautorefname{Footnote}
225   \def\itemautorefname{Item}
226   \def\figureautorefname{Figure}
227   \def\tableautorefname{Table}
228   \def\sectionautorefname{Section}
229   \def\subsectionautorefname{Subsection}
230   \def\subsubsectionautorefname{Sub-subsection}
231   \def\FancyVerbLineautorefname{Line}
232   \def\pageautorefname{Page}
233   \def\lstlistingautorefname{Code Fragment}

```

```

234 \def\definitionautorefname{Definition}
235 \def\propositionautorefname{Proposition}
236 \def\lemmaautorefname{Lemma}
237 \def\theoremautorefname{Theorem}
238 \def\axiomautorefname{Axiom}
239 \def\corollaryautorefname{Corollary}
240 \def\exerciseautorefname{Exercise}
241 \def\exampleautorefname{Example}
242 \def\proofautorefname{Proof}
243 \SetAlgorithmName{Algorithm}{Algorithm}{List of Algorithms}
244 \SetAlgoProcName{Procedure}{Procedure}
245 \SetAlgoFuncName{Function}{Function}
246 \def\AlgoLineautorefname{Line}
247 }{}

```

## 8 Style Setting

### 8.1 Beamer Style

```

248 \usetheme{Rochester}
249 \pgfdeclareimage[width=1.0\paperwidth]{hust-header}{hust-header.png}
250 \setbeamertemplate{itemize items}[circle]
251 \setbeamertemplate{enumerate items}[default]
252 \setbeamertemplate{blocks}[rounded][shadow=true]
253 \beamer@headheight=0.13\paperwidth
254 \definecolor{HUST@orange}{rgb}{0.96,0.5,0.04}
255 \definecolor{HUST@gray}{rgb}{0.40625,0.40625,0.40625}
256 \definecolor{HUST@lightgray}{rgb}{0.93,0.93,0.93}
257 \definecolor{HUST@blue}{rgb}{0.137,0.43,0.684}
258 \setbeamercolor*{Title bar}{fg=white}
259 \setbeamercolor*{Location bar}{fg=HUST@orange,bg=HUST@lightgray}
260 \setbeamercolor*{frametitle}{parent=Title bar}
261 \setbeamercolor*{block title}{bg=HUST@blue,fg=white}
262 \setbeamercolor*{block body}{bg=HUST@lightgray,fg=HUST@gray}
263 \setbeamercolor*{normal text}{bg=white,fg=HUST@gray}
264 \setbeamercolor*{section in head/footer}{bg=HUST@blue,fg=white}
265 \usecolortheme[named=HUST@orange]{structure}
266 \setbeamerfont{date}{size=\scriptsize,parent=structure}
267 \setbeamerfont{section in head/footer}{size=\tiny,series=\normalfont}
268 \setbeamerfont{frametitle}{size=\Large,series=\bfseries\HEI}
269 \setbeamertemplate{section in toc}[sections numbered]

```

```

270 \setbeamertemplate{subsection in toc}[subsections numbered]
271 \setbeamertemplate{navigation symbols}{ }
272 \setbeamertemplate{frametitle}
273 {
274   \vskip-0.25\beamer@headheight
275   \vskip-\baselineskip
276   \vskip-0.2cm
277   \hskip0.7cm\usebeamerfont*{frametitle}\insertframetitle
278   \vskip-0.10em
279   \hskip0.7cm\usebeamerfont*{framesubtitle}\insertframesubtitle
280 }
281 \setbeamertemplate{headline}
282 {
283   \pgfuseimage{hust-header}
284   \vskip -1.95cm
285   \linethickness{0pt}
286
287   \framelate{
288     \begin{beamercolorbox}[wd=\paperwidth,ht=0.3\beamer@headheight]{Title bar}
289       \usebeamerfont{section in head/foot}%
290       \hskip 1.2cm\insertsectionnavigationhorizontal{0pt}{\hskip0.22cm}{ }%
291     \end{beamercolorbox}}
292
293   \framelate{
294     \begin{beamercolorbox}[wd=\paperwidth,ht=0.7\beamer@headheight]{Title bar}
295     \end{beamercolorbox}}
296 }
297 \setbeamertemplate{footline}
298 {
299   \linethickness{0pt}
300   \framelate{
301     \begin{beamercolorbox}[leftskip=.3cm,wd=\paperwidth,ht=0.3\beamer@headheight,sep=0
302       \usebeamerfont{section in head/foot}%
303       \insertshortauthor~|~\insertshorttitle
304       \hfill
305       \insertframenumber/\inserttotalframenumber
306     \end{beamercolorbox}}
307 }

```

## 8.2 Equation Style

Allow long equation breaking between lines or pages.

```

308 \allowdisplaybreaks[4]

    Set skip between equation and context.
309 \abovedisplayskip=10bp plus 2bp minus 2bp
310 \abovedisplayshortskip=10bp plus 2bp minus 2bp
311 \belowdisplayskip=\abovedisplayskip
312 \belowdisplayshortskip=\abovedisplayshortskip

    Set equation numbering style.
313 \numberwithin{equation}{section}

```

### 8.3 Theorem Style

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

```

314 \theoremnumbering{arabic}
315 \ifthenelse{\equal{\HUST@language}{chinese}}{
316   \theoremseparator{: }
317 }{
318   \theoremseparator{:}
319 }
320 \theorempreskip{1.2ex plus 0ex minus 1ex}
321 \theorempostskip{1.2ex plus 0ex minus 1ex}
322 \theoremheaderfont{\normalfont\bfseries\HEI}
323 \theoremsymbol{}
324
325 \theoremstyle{definition}
326 \theorembodyfont{\normalfont}
327 \ifthenelse{\equal{\HUST@language}{chinese}}{
328   \newtheorem{definition}{定义}[section]
329 }{
330   \newtheorem{definition}{Definition}[section]
331 }
332
333 \theoremstyle{plain}
334 \theorembodyfont{\itshape}
335 \ifthenelse{\equal{\HUST@language}{chinese}}{
336   \newtheorem{proposition}{命题}[section]
337   \newtheorem{lemma}{引理}[section]
338   \newtheorem{theorem}{定理}[section]
339   \newtheorem{axiom}{公理}[section]
340   \newtheorem{corollary}{推论}[section]

```

```

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

```

## 8.4 Floating Objects Style

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

```

354 \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.

```

355 \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.

```

356 \renewcommand{\textfraction}{0.15}
357 \renewcommand{\topfraction}{0.85}
358 \renewcommand{\bottomfraction}{0.65}
359 \renewcommand{\floatpagefraction}{0.60}

```

## 8.5 Table Style

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

```

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

```

## 8.6 Caption Style

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

```

361 \DeclareCaptionFont{HUST@captionfont}{\changeont{size=11pt}}
362 \DeclareCaptionLabelFormat{HUST@caplabel}{#1~#2}

```



```

363 \captionsetup{
364     compatibility=false,
365     font=HUST@captionfont,
366     labelformat=HUST@caplabel,
367     format=hang,
368     labelsep=quad,
369     skip=12pt
370 }

```

## 8.7 Code Highlight Style

```

371 \definecolor{HUST@lstgreen}{rgb}{0,0.6,0}
372 \definecolor{HUST@lstmauve}{rgb}{0.58,0,0.82}
373
374 \lstset{
375     basicstyle=\footnotesize\ttfamily\changeont{linespread=1}\FANGSONG,
376     keywordstyle=\color{blue}\bfseries,
377     commentstyle=\color{HUST@lstgreen}\itshape\KAI,
378     stringstyle=\color{HUST@lstmauve},
379     showspaces=false,
380     showstringspaces=false,
381     showtabs=false,
382     numbers=left,
383     numberstyle=\tiny\color{black},
384     frame=lines,
385     rulecolor=\color{black},
386     breaklines=true
387 }

```

## 8.8 Bibliography Style

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

```

388 \ifthenelse{\equal{\HUST@language}{chinese}}{
389     \def\thudot{\unskip.}
390     \def\thumasterbib{[Master Thesis]}
391     \def\thuphdbib{[Doctor Thesis]}
392     \bibliographystyle{thubib}
393 }{
394     \bibliographystyle{IEEEtran}
395     \let\HUST@bibliography\bibliography
396     \def\bibliography#1{\HUST@bibliography{IEEEabrv,#1}}

```

397 }

## 9 Specical Page

**\maketitle** Commands to generate title page.

```
\makecover 398 \def\maketitle{
399   \let\HUST@oldthepage\thepage
400   \ifthenelse{\equal{\HUST@language}{chinese}}
401   {\def\thepage{封面}}
402   {\def\thepage{Titlepage}}
403   \begingroup
404   \setbeamertemplate{headline}{\pgfuseimage{hust-header}}
405   \setbeamertemplate{footline}
406   {
407     \linethickness{0pt}
408     \framelatex{
409       \begin{beamercolorbox}[leftskip=.3cm,wd=\paperwidth,ht=0.3\beamer@headheight,sep
410       \usebeamerfont{section in head/foot}%
411       \insertshortauthor~|\~\insertshorttitle
412       \hfill
413       \end{beamercolorbox}}
414   }
415   \frame{\titlepage}
416   \endgroup
417   \let\thepage\HUST@oldthepage
418   \setcounter{framenum}{0}
419 }
420 \let\makecover\maketitle
```

**\PrintTOC** A command to generate table of contents.

```
421 \def\PrintTOC{
422   \section*{}
423   \begin{frame}{\contentsname}
424   \pdfbookmark{\contentsname}{\contentsname}
425   \tableofcontents[subsubsectionstyle=hide]
426   \end{frame}
427 }
```

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

```
428 \newif\ifHUST@TOCAtBeginSection
```

```
429 \HUST@TOCAtBeginSectiontrue
```

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

```
430 \def\EnableTOCAtBeginSection{\HUST@TOCAtBeginSectiontrue}
```

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

```
431 \def\DisableTOCAtBeginSection{\HUST@TOCAtBeginSectionfalse}
```

Insert current table of contents at beginning of section.

```
432
```

```
433 \AtBeginSection[] {
```

```
434 \ifHUST@TOCAtBeginSection
```

```
435 \begin{frame}{\secname}
```

```
436 \tableofcontents[sectionstyle=show/shaded,subsectionstyle=hide]
```

```
437 \end{frame}
```

```
438 \else\fi
```

```
439 }
```

```
440 \AtBeginSubsection[] {
```

```
441 \ifHUST@TOCAtBeginSection
```

```
442 \begin{frame}{\secname}{\subsecname}
```

```
443 \tableofcontents[sectionstyle=show/hide,subsectionstyle=show/shaded/hide,subsubsec
```

```
444 \end{frame}
```

```
445 \else\fi
```

```
446 }
```

## 10 Other Command

**\email**

```
447 \def\email#1{
```

```
448 \href{mailto:#1}{\texttt{#1}}
```

```
449 }
```

```
450 \</class>
```

## V Index

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