

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

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\*This document corresponds to hustbeamer.cls v1.1, dated 2016/06/01.

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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  $\text{X}_{\text{Y}}\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$  或  $\text{L}_{\text{u}}\text{aL}_{\text{A}}\text{T}_{\text{E}}\text{X}$ （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 = <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`。

## 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。
- **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 **X<sub>Y</sub>LaTeX**) 和宏包 **luatex-j**a (对于 **LuLaTeX**) 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<sub>La</sub>TeX or Lua<sub>La</sub>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{\langleEmail 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`.

- **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}
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 }
17
18 Process options and load class beamer.
19
20 \DeclareOption*{\PassOptionsToClass{\CurrentOption}{beamer}}
21 \ProcessOptionsX
22 \LoadClass[12pt,utf8,compress,mathserif,noamsthm,xcolor=table]{beamer}
```

### 2 Check Engine

Check engine, only  $\text{XeLaTeX}$  and  $\text{LuaLaTeX}$  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  $\text{X}\text{E}\text{L}\text{A}\text{T}\text{E}\text{X}$ ) or `luatex-j` package (for  $\text{L}\text{u}\text{a}\text{L}\text{A}\text{T}\text{E}\text{X}$ , 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}

```

*(End definition for \HEI. This function is documented on page 7.)*

## **\KAI**

```

77 \newCJKfontfamily\KAI{Adobe Kaiti Std}

```

*(End definition for \KAI. This function is documented on page 7.)*

## **\FANGSONG**

```

78 \newCJKfontfamily\FANGSONG{Adobe Fangsong Std}

```

*(End definition for \FANGSONG. This function is documented on page 7.)*

## **\hei**

```

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

```

(End definition for `\hei`. This function is documented on page 7.)

### `\kai`

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

(End definition for `\kai`. This function is documented on page 7.)

### `\fangsong`

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

(End definition for `\fangsong`. This function is documented on page 7.)

```
82 \else\fi
83 \ifLuaTeX % LuaTeX 下使用 luatex-ja 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}
```

(End definition for `\HEI`. This function is documented on page 7.)

### `\KAI`

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

(End definition for `\KAI`. This function is documented on page 7.)

### `\FANGSONG`

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

(End definition for `\FANGSONG`. This function is documented on page 7.)

### `\hei`

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



(End definition for `\hei`. This function is documented on page 7.)

`\kai`

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

(End definition for `\kai`. This function is documented on page 7.)

`\fangsong`

```
103 \newcommand{\fangsong}[1]{\jfontspec{AdobeFangsongStd-Regular} #1}
```

(End definition for `\fangsong`. This function is documented on page 7.)

```
104 \else\fi
```

Generate Chinese number using `zhnumber`.

```
105 \RequirePackage{zhnumber}
```

```
106 \def\CJKnumber#1{\zhnumber{#1}} % 兼容 CJKnumb
```

```
107 }{}
```

## 4 Basic Format

We set global line spread to 1.2.

```
108 \linespread{1.2}\selectfont
```

Papaer setting.

```
109 \pagewidth=\paperwidth
```

```
110 \pageheight=\paperheight
```

Indent of paragraph and skip between paragraphs.

```
111 \RequirePackage[indentfirst]
```

```
112 \setlength{\parindent}{2em}
```

```
113 \setlength{\parskip}{0pt plus 2pt minus 1pt}
```

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

```
114 \RequirePackage[unicode]{hyperref}
```

```
115 \definecolor{HUST@hyperreflinkred}{RGB}{128,23,31}
```

```
116 \hypersetup{
```

```
117   bookmarksnumbered=true,
```

```
118   bookmarksopen=true,
```

```
119   bookmarksopenlevel=3,
```

```
120   colorlinks=true,
```

```
121   allcolors=HUST@hyperreflinkred,
```

```
122   pdfpagemode={FullScreen},
```

```
123   pdfinfo={Template.Info={hustbeamer.cls v1.0 2013/07/01, Copyright (C) 2013-2014 by
```

```
124 } }
```

## 5 Load Packages

Load packages for math.

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

Load packages for picture.

```
130 \RequirePackage{overpic}
131 \RequirePackage{graphicx,caption,subcaption}
132 \RequirePackage{pgf,pgfarrows,pgfnodes,pgfautomata,pgfheaps,pgfshade}
```

Load packages for table.

```
133 \RequirePackage{array,tabu}
134 \RequirePackage{multirow}
```

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

```
135 \RequirePackage{listings}
```

Load package for bibliography cite style.

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

Other packages for style setting.

```
137 \RequirePackage{datenumbers}
138 \RequirePackage{etoolbox}
```

## 6 Variables Setting

`\title` A command to set the title.

```
139 \let\HUST@oldtitle\title
140 \DeclareDocumentCommand\title{o m}
141 {
142   \IfNoValueTF{#1}{
143     \HUST@oldtitle{#2}
144   }{
145     \HUST@oldtitle[#1]{#2}
146   }
147   \hypersetup{pdftitle={#2}}
148 }
149 \title{}
```

(End definition for `\title`. This function is documented on page 10.)

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

```
150 \let\HUST@oldauthor\author
151 \DeclareDocumentCommand\author{o +m}
152 {
153   \IfNoValueTF{#1}{
154     \HUST@oldauthor{#2}
155     \hypersetup{pdfauthor={#2}}
156   }{
157     \HUST@oldauthor[#1]{#2}
158     \hypersetup{pdfauthor={#1}}
159   }
160 }
161 \author{}
```

(End definition for `\author`. This function is documented on page 10.)

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

```
162 \let\HUST@olddate\date
163 \DeclareDocumentCommand\date{m g g}
164 {
165   \IfNoValueTF{#2}{
166     \HUST@olddate{#1} % only one argument
167   }{
168     \IfNoValueTF{#3}{ % two arguments
169       \setdate{#1}{#2}{1}
170       \ifthenelse{\equal{\HUST@language}{chinese}}{
171         \HUST@olddate{\thedatayear~年~\thedatemonth~月}
172       }{
173         \HUST@olddate{\datemonthname~\thedatayear}
174       }
175     }{ % three arguments
176       \setdate{#1}{#2}{#3}
177       \ifthenelse{\equal{\HUST@language}{chinese}}{
178         \HUST@olddate{\thedatayear~年~\thedatemonth~月~\thedateday~
179         日}
180       }{
181         \HUST@olddate{\datedate}
182       }
183     }
184   }
185 }
```

```

184 }
185 \setdatetoday
186 \date{\thedayyear}{\thedaymonth}{\thedayday}

```

(End definition for \date. This function is documented on page 10.)

## 7 Localization

Chinese localization.<sup>2</sup>

```

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

```

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

```

217 \def\AlgoLineautorefname~#1\null{第~#1~行\null}
218 }{}

```

English localization.

```

219 \ifthenelse{\equal{\HUST@language}{english}}{
220 \def\contentsname{Contents}
221 \def\equationautorefname{Equation}
222 \def\footnoteautorefname{Footnote}
223 \def\itemautorefname{Item}
224 \def\figureautorefname{Figure}
225 \def\tableautorefname{Table}
226 \def\sectionautorefname{Section}
227 \def\subsectionautorefname{Subsection}
228 \def\subsubsectionautorefname{Sub-subsection}
229 \def\FancyVerbLineautorefname{Line}
230 \def\pageautorefname{Page}
231 \def\lstlistingautorefname{Code Fragment}
232 \def\definitionautorefname{Definition}
233 \def\propositionautorefname{Proposition}
234 \def\lemmaautorefname{Lemma}
235 \def\theoremautorefname{Theorem}
236 \def\axiomautorefname{Axiom}
237 \def\corollaryautorefname{Corollary}
238 \def\exerciseautorefname{Exercise}
239 \def\exampleautorefname{Example}
240 \def\proofautorefname{Proof}
241 \SetAlgorithmName{Algorithm}{Algorithm}{List of Algorithms}
242 \SetAlgoProcName{Procedure}{Procedure}
243 \SetAlgoFuncName{Function}{Function}
244 \def\AlgoLineautorefname{Line}
245 }{}

```

## 8 Style Setting

### 8.1 Beamer Style

```

246 \usetheme{Rochester}
247 \pgfdeclareimage[width=1.0\paperwidth]{hust-header}{hust-header.png}
248 \setbeamertemplate{itemize items}[circle]
249 \setbeamertemplate{enumerate items}[default]
250 \setbeamertemplate{blocks}[rounded][shadow=true]

```

```

251 \beamer@headheight=0.13\paperwidth
252 \definecolor{HUST@orange}{rgb}{0.96,0.5,0.04}
253 \definecolor{HUST@gray}{rgb}{0.40625,0.40625,0.40625}
254 \definecolor{HUST@lightgray}{rgb}{0.93,0.93,0.93}
255 \definecolor{HUST@blue}{rgb}{0.137,0.43,0.684}
256 \setbeamercolor*{Title bar}{fg=white}
257 \setbeamercolor*{Location bar}{fg=HUST@orange,bg=HUST@lightgray}
258 \setbeamercolor*{frametitle}{parent=Title bar}
259 \setbeamercolor*{block title}{bg=HUST@blue,fg=white}
260 \setbeamercolor*{block body}{bg=HUST@lightgray,fg=HUST@gray}
261 \setbeamercolor*{normal text}{bg=white,fg=HUST@gray}
262 \setbeamercolor*{section in head/footer}{bg=HUST@blue,fg=white}
263 \usecolortheme[named=HUST@orange]{structure}
264 \setbeamerfont{date}{size=\scriptsize,parent=structure}
265 \setbeamerfont{section in head/footer}{size=\tiny,series=\normalfont}
266 \setbeamerfont{frametitle}{size=\Large,series=\bfseries\HEI}
267 \setbeamertemplate{section in toc}[sections numbered]
268 \setbeamertemplate{subsection in toc}[subsections numbered]
269 \setbeamertemplate{navigation symbols}{}
270 \setbeamertemplate{frametitle}
271 {
272   \vskip-0.25\beamer@headheight
273   \vskip-\baselineskip
274   \vskip-0.2cm
275   \hskip0.7cm\usebeamerfont*{frametitle}\insertframetitle
276   \vskip-0.10em
277   \hskip0.7cm\usebeamerfont*{framesubtitle}\insertframesubtitle
278 }
279 \setbeamertemplate{headline}
280 {
281   \pgfuseimage{hust-header}
282   \vskip -1.95cm
283   \linethickness{0pt}
284
285   \framelatex{
286     \begin{beamercolorbox}[wd=\paperwidth,ht=0.3\beamer@headheight]{Title bar}
287       \usebeamerfont{section in head/footer}%
288       \hskip 1.2cm\insertsectionnavigationhorizontal{0pt}{\hskip0.22cm}{}%
289     \end{beamercolorbox}}
290
291   \framelatex{

```

```

292 \begin{beamercolorbox}[wd=\paperwidth,ht=0.7\beamer@headheight]{Title bar}
293 \end{beamercolorbox}
294 }
295 \setbeamertemplate{footline}
296 {
297 \linethickness{0pt}
298 \framelatex{
299 \begin{beamercolorbox}[leftskip=.3cm,wd=\paperwidth,ht=0.3\beamer@headheight,sep=0
300 \usebeamerfont{section in head/foot}%
301 \insertshortauthor~|~\insertshorttitle
302 \hfill
303 \insertframenumbers/\inserttotalframenumbers
304 \end{beamercolorbox}}
305 }

```

## 8.2 Equation Style

Allow long equation breaking between lines or pages.

```
306 \allowdisplaybreaks[4]
```

Set skip between equation and context.

```

307 \abovedisplayskip=10bp plus 2bp minus 2bp
308 \abovedisplayshortskip=10bp plus 2bp minus 2bp
309 \belowdisplayskip=\abovedisplayskip
310 \belowdisplayshortskip=\abovedisplayshortskip

```

Set equation numbering style.

```
311 \numberwithin{equation}{section}
```

## 8.3 Theorem Style

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

```

312 \theoremnumbering{arabic}
313 \ifthenelse{\equal{\HUST@language}{chinese}}{
314 \theoremseparator{: }
315 }{
316 \theoremseparator{:}
317 }
318 \theorempreskip{1.2ex plus 0ex minus 1ex}
319 \theorempostskip{1.2ex plus 0ex minus 1ex}
320 \theoremheaderfont{\normalfont\bfseries\HEI}
321 \theoremsymbol{}

```

```

322
323 \theoremstyle{definition}
324 \theorembodyfont{\normalfont}
325 \ifthenelse{\equal{\HUST@language}{chinese}}{
326 \newtheorem{definition}{定义}[section]
327 }{
328 \newtheorem{definition}{Definition}[section]
329 }
330
331 \theoremstyle{plain}
332 \theorembodyfont{\itshape}
333 \ifthenelse{\equal{\HUST@language}{chinese}}{
334 \newtheorem{proposition}{命题}[section]
335 \newtheorem{lemma}{引理}[section]
336 \newtheorem{theorem}{定理}[section]
337 \newtheorem{axiom}{公理}[section]
338 \newtheorem{corollary}{推论}[section]
339 \newtheorem{exercise}{练习}[section]
340 \newtheorem{example}{例}[section]
341 \def\proofname{\hei{证明}}
342 }{
343 \newtheorem{proposition}{Proposition}[section]
344 \newtheorem{lemma}{Lemma}[section]
345 \newtheorem{theorem}{Theorem}[section]
346 \newtheorem{axiom}{Axiom}[section]
347 \newtheorem{corollary}{Corollary}[section]
348 \newtheorem{exercise}{Exercise}[section]
349 \newtheorem{example}{Example}[section]
350 \def\proofname{\textbf{Proof}}
351 }

```

## 8.4 Floating Objects Style

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

```
352 \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.

```
353 \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.



```

354 \renewcommand{\textfraction}{0.15}
355 \renewcommand{\topfraction}{0.85}
356 \renewcommand{\bottomfraction}{0.65}
357 \renewcommand{\floatpagefraction}{0.60}

```

## 8.5 Table Style

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

```

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

```

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

## 8.6 Caption Style

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

```

359 \DeclareCaptionFont{HUST@captionfont}{\fontsize{11pt}{13.2pt}\selectfont}
360 \DeclareCaptionLabelFormat{HUST@caplabel}{#1~#2}
361 \captionsetup{
362   compatibility=false,
363   font=HUST@captionfont,
364   labelformat=HUST@caplabel,
365   format=hang,
366   labelsep=quad,
367   skip=12pt
368 }

```

## 8.7 Code Highlight Style

```

369 \definecolor{HUST@lstgreen}{rgb}{0,0.6,0}
370 \definecolor{HUST@lstmauve}{rgb}{0.58,0,0.82}
371
372 \lstset{
373   basicstyle=\footnotesize\ttfamily\linespread{1}\selectfont\FANGSONG,
374   keywordstyle=\color{blue}\bfseries,
375   commentstyle=\color{HUST@lstgreen}\itshape\KAI,
376   stringstyle=\color{HUST@lstmauve},
377   showspaces=false,
378   showstringspaces=false,
379   showtabs=false,
380   numbers=left,
381   numberstyle=\tiny\color{black},

```

```

382   frame=lines,
383   rulecolor=\color{black},
384   breaklines=true
385 }

```

## 8.8 Bibliography Style

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

```

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

```

## 9 Special Page

`\maketitle` Commands to generate title page.

```

\makecover396 \def\maketitle{
397   \let\HUST@oldthepage\thepage
398   \ifthenelse{\equal{\HUST@language}{chinese}}
399     {\def\thepage{封面}}
400     {\def\thepage{Titlepage}}
401   \begingroup
402   \setbeamertemplate{headline}{\pgfuseimage{hust-header}}
403   \setbeamertemplate{footline}
404   {
405     \linethickness{0pt}
406     \framelatex{
407       \begin{beamercolorbox}[leftskip=.3cm,wd=\paperwidth,ht=0.3\beamer@headheight,sep
408         \usebeamerfont{section in head/foot}%
409         \insertshortauthor~|~\insertshorttitle
410         \hfill
411       \end{beamercolorbox}}
412   }
413   \frame{\thepage}

```

```

414 \endgroup
415 \let\thepage\HUST@oldthepage
416 \setcounter{framenumbers}{0}
417 }
418 \let\makecover\maketitle

```

*(End definition for \maketitle and \makecover. These functions are documented on page 10.)*

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

```

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

```

*(End definition for \PrintTOC. This function is documented on page 10.)*

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

```

426 \newif\ifHUST@TOCAtBeginSection
427 \HUST@TOCAtBeginSectiontrue

```

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

```

428 \def\EnableTOCAtBeginSection{\HUST@TOCAtBeginSectiontrue}

```

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

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

```

429 \def\DisableTOCAtBeginSection{\HUST@TOCAtBeginSectionfalse}

```

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

Insert current table of contents at beginning of section.

```

430
431 \AtBeginSection[] {
432 \ifHUST@TOCAtBeginSection
433 \begin{frame}{\secname}
434 \tableofcontents[sectionstyle=show/shaded,subsectionstyle=hide]
435 \end{frame}
436 \else\fi
437 }

```

```
438 \AtBeginSubsection[] {
439 \ifHUST@TOCAtBeginSection
440 \begin{frame}{\secname}{\subsecname}
441 \tableofcontents[sectionstyle=show/hide,subsectionstyle=show/shaded/hide,subsubsec
442 \end{frame}
443 \else\fi
444 }
```

## 10 Other Command

`\email`

```
445 \def\email#1{
446 \href{mailto:#1}{\texttt{#1}}
447 }
```

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

```
448 %</class>
```

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