The HDuTHESIS Class

LATEX Thesis Template for Hangzhou Dianzi University

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Abstract

HDUTHESIS 是杭州电子科技大学毕业论文 LYFX 模板,支持学士论文排版.后续会扩展到硕士、博士论文.

User Agreement

- 1. 本模板通过 LPPL 1.3c 协议开放源代码,您可以随意使用编译出的 PDF 文件.
- 2. 截止本文档编译时,杭州电子科技大学教务处只提供 Word 模板 ¹. 作者不对使用本模板产生的格式审查问题负责. 如果您所在的学院要求提交.docx 格式的论文稿件.请勿执意使用本模板.避免因格式转换带来不必要的麻烦.欢迎前往 GitHub 提交反馈意见,为推动学校认证与规范化 HouThesis 贡献力量.

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[†]https://github.com/xiamyphys/litetable

¹https://jwc.hdu.edu.cn/2022/0428/c4528a153813/page.htm

1 Generate the Cover

此命令接收键值,用于设置文档信息. 键 器title 用于设置论文标题,键 器school 用于设置学院,键 器 major 用于设置专业,键 器 class 用于设置班级,键 器 stdntid 用于设置学号,键 器 author 用于设置作者,键 器 supervisor 用于设置导师.

```
\documentclass{hduthesis}
\DocInfo
{
  title = XXXXXX , school = 理学院, major = , class = ,
  stdntid = , author = , supervisor = ,
}
\begin{document} \maketitle ... \end{document}
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命令 \DocInfo 需在导言区中执行. 通过此命令完成文档信息输入后,在 \begin{document} 后执行命令 \maketitle 会调用所设置的键值并自动生成论文封面和诚信承诺书.

论文完成日期和学生毕业年份会根据当前系统时间自动生成. 如果当前月份在8月及以前,毕业年份会显示当前年;如果当前月份在9月及以后,毕业年份会显示次年. 如果执意要更改毕业年份,则需在导言区中命令\DocInfo后输入

\ExplSyntaxOn

\int_set:Nn \l__hduthesis_grade_int {<Graduate Year>}
\ExplSyntaxOff

2 Enter Abstract in EN / CN

abstract (env.) $\end{abstract}$ [en] ... $\end{abstract}$ \end{abstract} \keywords \begin{abstract}[cn] ... $\end{abstract}$ \end{abstract}

环境 abstract 用于生成摘要,其可选参数可设置语言格式. 命令 \keywords 需在 abstract 环境内执行,其会根据 abstract 环境所选择的语言,自动生成英文/中文格式的关键词.

通过命令 \keywords 以半角逗号 (,) 为分隔输入关键词列表,输出时会根据所处 abstract 环境选择的语言不同,自动以半 / 全角分号分隔.

杭州电子科技大学本科毕业设计(论文)

ABSTRACT

The main aim of this thesis is to design and realize signal processing of a self-developed laser target shooting system and then realize the whole laser target shooting system. The laser target shooting system consists of semiconductor laser gun, photo-electric detector, and signal processing circuit, which is the key part of the whole system. Laser target shooting process go though following steps: laser gun emitted a pulse of laser, which would be received by the laser target and the results of shooting will be shown on screen of computer by series signal processing. The laser target consists of some silton photoelectric units that were encoded with different numbers according to certain rule. The result of the shooting will be got when detecting the number of the photoelectric unit that treceives the laser pulse.

The signal processing of the laser target shooting system mainly consists of signal amplification, signal encoding and data transmission. The inspected photoelectric signal was then amplified by operator amplifiers, coded by multiplex priority encoder according to the prearranged rule, and then transferred to computer by 80°C2051 MCU through its serial port. And then computer can process the signal. The program of 89°C2051 MCU is designed in kell and debugged using kell compiler. It is designed to control the data transmission with computer.

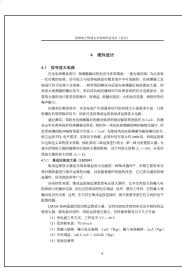
The designed signal processing system can detect signal effectively. Through the serial data transmission, computer can process the shooting result, such as display, statistics and storage etc. It provide direct and exact shooting result for trainer, so it can increase the efficiency of the shooting training.

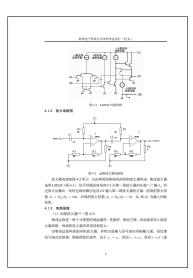
Keywords: laser target shooting; signal amplification; signal encode; serial data transmission

3 Input Text

HDUTHESIS 的 chapter、\section、\subsection、\enumerate 等段落级次均已按"杭电理工类毕业论文写作规范"定制,可直接使用.







同时,模板额外预制了如下宏包

| amsmath | amssymb | bm | booktabs | cancel | cleveref |
|------------|-----------|--------|-----------|----------|----------|
| derivative | extarrows | fixdif | mathtools | multicol | physics2 |

如需插入参考文献,在导言区使用命令 \addbibsource{⟨.bib file name⟩} 导入 .bib 文件,并在文章末尾输入 \printbiblography 即可. 文档已将参考文献格式设置为 gb7714-2015.

A The Code

HDUTHESIS 文档类采用模块化设计,根文件 hduthesis.cls 中 \key_define: 用于声明文档信息的键,并调用其他模块.

- 1. 字体配置模块存放于 hduthesis-font-module.code.tex 中.
- 2. 封面信息模块存放于 hduthesis-cover-module.code.tex 中,分别使用 \1_spread_box 和 \1_center_box 实现分散对齐和居中划线.
- 3. 中英摘要模块存放于 hduthesis-matter-module.code.tex 中,使用 \str_if_eq:nnT 对摘要语言进行判断.
- 4. 章节段落模块存放于 hduthesis-layout-module.code.tex 中,参照标准文档类说明文档 (texdoc classes),对相应的宏进行重新定义.后期维护者可考虑使用 titlesec 包.

```
% 预留学号接口,用于后续判断学位.
\cs_new_protected_nopar:Npn \int_if_exist_use:N #1
   \int_compare:nNnT #1 > 0
       \int use:N #1
\keys_define:nn { hduthesis / docinfo }% 声明相应键
 {
 title.tl_set:N = \l__docinfo_title_tl,
 school.tl_set:N = \l__docinfo_school_tl,
 major.tl_set:N = \l__docinfo_major_tl,
 class.tl_set:N = \l__docinfo_class_tl,
 stdntid.int_set:N = \l__docinfo_stdntid_int,
 author.tl_set:N = \l__docinfo_author_tl,
 supervisor.tl_set:N = \l__docinfo_supervisor_tl,
\NewDocumentCommand \DocInfo { m }
   \keys_set:nn { hduthesis / docinfo } { #1 }
 }
```