新版本 Elsarticle 投稿模板使用示例说明

2019年8月

前言

前一段时间,我们发布了 Elsevier 投稿模板使用说明 - 中文翻译版发布 https://www.latexstudio.net/archives/51668.html, 得到不少用户的认可。

近期, Elsevier 官网 图形 模板进行了大版本升级,具体下载可以到这里 https://www.ctan.org/pkg/els-cas-templates/。

该版本使用上有了一定的差异,基于此,我们翻译了一些新内容,也总结了新的使用,制作了这一个示例使用中文说明文档,希望对于大家学习其新版本的模板有所帮助。

欢迎大家关注我们的公众号,我们的问答区也已经上线https://wenda.latexstudio.net,欢迎大家注册交流。



以下内容主要选自 Elsarticle wiki 翻译。

1 类基本参数

Elsarticle-CAS 包括两个 cls 文件及其配套的 sty 和 bst 文件。

1. cas-sc.cls 是为单栏文章定制的。

```
\documentclass[<options>]{cas-sc}
```

2. cas-dc.cls 是为双栏文章定制的。

```
\documentclass[<options>]{cas-dc}
```

- 3. cas-common.sty 是公用的宏包,两个 cls 文件都调用了这个宏包。
- 4. model1-num-names.bst 和 model2-names.bst 是参考文献样式控制文件。

两个文档类都有 longmktitle 选项处理比较长的前言。

以上文件均已被 TEXLive 收录。

2 How to compile (如何编译)

假设现在要编译示例的 cas-dc-template.tex 文件可以按照如下的顺序进行:

		Terminal:1
1	pdflatex cas-dc-template	
2	bibtex cas-dc-template	
3	pdflatex cas-dc-template	
4	pdflatex cas-dc-template	

或者使用 latexmk 进行编译:

	Terminal:2	
latexmk -pdf cas-dc-template		

3 Front matter (前言)

3.1 Title

\title 命令有如下的选项。

This is a specimen a_b title*.**

Sir CV Radhakrishnan a,c,*,1 (Researcher), Han The
h Thanh $^{b,d},\$ CV Rajagopal Jr b,c,2 (Co-ordinator) and Rishi T.a,c,*

a Elsevier B.V., Radarweg 29, 1043 NX Amsterdam. The Netherlands

-Eisever B.V., Radaiweg 29, 10-5 NA Antiseraan, 11te Neuteriania B-Sayahna Foundation, Jagathy, Trivandrum 695014, India STM Document Engineering Pvt Ltd., Mepukada, Malayinkil, Trivandrum 695571, India

ARTICLE INFO

Keywords: quadrupole exciton polariton

ABSTRACT

This template helps you to create a properly formatted LöfigX manuscript. \heating template helps you to create a properly formatted LofigX manuscript. \heating template the contain the abstract and keywords respectively. Each keyword shall be separated by a \aep command.

The Elsevier cas-sc class is based on the standard article class and supports almost all of the functionality of that class. In addition, it features commands and options to format the

- · document style
- baselineskip
- · keywords and MSC codes
- · theorems, definitions and proofs
- · lables of enumerations
- · citation style and labeling.

This class depends on the following packages for its proper functioning

- natbib.sty for citation processing;

- geometry.sty for margin settings;
 fleqn.clo for left aligned equations;
 graphics.xty for graphics inclusion;
 hyperref.sty optional packages if hyperlinking is required in the document;

4. graphics.xty for graphics inclusion;
5. hyperref.sty optional packages if hyperlinking is required in the document;

All the above packages are part of any standard Max installation. Therefore, the users need not be thered about downloading any extra packages.

This document is the results of the research project funded by the National Science Foundation.

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*This document is the results of the research project funded by the National Science Foundation.

*The second title footnote which is a longer text matter to fill through the whole text width and overflow into another line in the state.

"The second title footnote which is a longer text matter to the unrough the whole the footnotes area of the first page.

This note has no numbers. In this work we demonstrate a_b the formation Y₂1 of a new type of polariton on the interface between a cuprous oxide slab and a polystyrene micro-sphere placed on the slab.

Re

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Rawat et al : Preprint submitted to Elsevier

This is a specimen a_b title*.**

Sir CV Radhakrishnan a,c,s,1 (Researcher), Han Theh Thanh b,d , CV Rajagopal Jr b,c,2 (Co-ordinator) and Rishi T. a,c,*s,1,3

^aElsevier B.V., Radarweg 29, 1043 NX Amsterdam, The Netherlands

^bSayahna Foundation, Jagathy, Trivandrum 695014, India ^cSTM Document Engineering Pvt Ltd., Mepukada, Malayinkil, Trivandrum 695571, India

ARTICLE INFO ABSTRACT

This template helps you to create a properly formatted ETeX manuscript.

\text{\logstimbstract}...\endshtract and \text{\logstimbstract} and \text{\logstimb

1. Introduction

The Elsevier cas-dc class is based on the standard article class and supports almost all of the functionality of that class. In addition, it features commands and options to format the

- document style
- · front matter
- · keywords and MSC codes
- theorems, definitions and proofs
- · lables of enumerations
- · citation style and labeling.

This class depends on the following packages for $$\bf 3.$$ Front matter its proper functioning:

- natbib.sty for citation processing;
 geometry.sty for margin settings;
 fleqn.clo for left aligned equations;
 graphicx.sty for graphics inclusion;

*This document is the results of the research project funded by National Science Foundation.

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hyperref.sty optional packages if hyperlinking is required in the document;

All the above packages are part of any standard X installation. Therefore, the users need not be bothered about downloading any extra packages

2. Installation

2. Installation

The package is available at author resources page at Elsevier (http://www.elsevier.com/locate/lates). The class may be moved or copied to a place, usually, STEDM*/tex/lates/lesevier/, or folder which will be read by BTeX during document compilation. The TeX file database needs updation after moving/copying class file. Usually, we use commands like attexts or texhash depending upon the distribution and operating system.

The author names and affiliations could be formatted in two ways:

Group the authors per affiliation.
 Use footnotes to indicate the affiliations.

See the front matter of this document for examples You are recommended to conform your choice to the journal you are submitting to.

4. Bibliography styles

There are various bibliography styles available. You can select the style of your choice in the preamble of this document. These styles are Elsevier styles based on standard styles like Harvard and Vancouver. Please use BibTeX to generate your bibliography and include DOIs whenever available.

Here are two sample references: [7] [7, 8] [7, 9]

Figures may be included using the command, \includegraphics in combination with or without its several options to further control graphic. \includegraphics

图 1: 单栏模板(左)与双栏模板(右)效果展示图

1. title:文章的标题

_ Code:3 _ **\title**[mode=title]{This is a title}

2. alt: 替代标题

____ Code:4 ____ **\title**[mode=alt]{This is a alternate title}

3. sub: 副标题

_ Code:5 **\title**[mode=sub]{This is a sub title}

4. trans:翻译的标题

__ Code:6 _

\title[mode=trans]{This is a translated title}

5. transsub:翻译的副标题

_ Code:7 ___

\title[mode=transsub]{This is a translated sub title}

3.2 Author (作者)

\author 命令有如下选项:

- 1. type 默认为 author ,可填入 editor
- 2. auid Author id 的缩写
- 3. bioid Biography id 的缩写,大意为传记的 id
- 4. alt Alternate author, 副作者
- 5. style 作者名字的风格,如 Chinese,默认值为 normal
- 6. prefix 前缀, 例如 sir
- 7. suffix 后缀
- 8. degree
- 9. role
- 10. orcid Open Reserve and Contributor ID , 开放研究者和作者 ID
- 11. collab Collaboration 缩写
- 12. anon Anonymous author 缩写,匿名作者
- 13. deceased 已故作者
- 14. twitter Twitter 账号
- 15. facebook Facebook 账户
- 16. linkedin Linkedin 账户
- 17. plus Google plus 账户
- 18. gplus Google plus 账户, 有点奇怪, 和上一条一样了

使用示例:

```
\author[1,3]{Author Name}[type=editor,
auid=000,bioid=1,
prefix=Sir,
role=Researcher,
orcid=0000-0001-7511-2910,
facebook=<facebook id>,
twitter=<twitter id>,
linkedin=<linkedin id>,
gplus=<gplus id>]
```

3.3 Various Marks in the Front Matter (前言的不同标记)

前言部分由于文章标题和作者需要不同的标记导致情况有些复杂。标题的标记可以用 star mark (*),脚注用阿拉伯数字在右上角标记。通讯作者用共形星号(*)标记。

3.3.1 Title marks (标题标记)

标题标记可以用 \totemark[num],通讯信息可以用 \tnotetext[num]{text}。例如:

```
\title[mode=title]{Leveraging social media news to predict stock index

movement using RNN-boost}

\tnotemark[1,2]

\tnotetext[1]{This document is the results of the research project

funded by the National Science Foundation.}

\tnotetext[2]{The second title footnote which is a longer text matter to

fill through the whole text width and overflow into another line in

the footnotes area of the first page.}
```

\tnotetext 和 \tnotemark 这两个命令可以放在 \maketitle 前的任何前言位置。

3.3.2 Author marks (作者标记)

作者的标记可以有很多不同的标记信息:

1. 脚注标注: \fnmark[<num>]

2. 脚注文本: \fntext[<num>]{<text>}

3. 联系标记: \author[<num>]

4. 邮箱: \ead{<emailid>}

5. 链接: \ead[url]{<url>}

6. 通讯作者标记: \cormark[<num>]

7. 通讯作者信息: \cortext[<num>]{<text>}

3.3.3 Other marks (其它标记)

有时作者希望在作者名字的地方不加标记符号,但是在标记信息要在前言部分出现,改文档提供了 nonumote 命令来满足改需求。用法如下:

```
\nonumnote{<text>}
```

放在 \maketitle 前的任何前言部分都可以。

3.4 Abstract and keywords (摘要与关键词)

摘要应该放在"摘要"环境中,即 \begin{abstract} 后,\end{abstract} 前。超过一页比较长的摘要也是允许的,即使是在双栏模式下。为了能够让长摘要顺利排版,必须启用 longmktitle 的全局选项。

关键词要放在 {keyword} 环境中。

例子如下:

```
Code:11

| begin{abstract}
| This is a abstract. \lipsum[3]
| \end{abstract}
| begin{keywords}
```

ARTICLE INFO

ABSTRACT

This template helps you to create a properly formatted LaTeX manuscript.

\text{\loginabstract...\endabstract and \begin{\keyword} \text{\loginabstract and \begin{\keyword} \

图 2: 摘要与关键词

4 Main matter (主体部分)

4.1 Tables (表格)

简单的 table 环境可能无法满足复杂表格的需求。如果作者想在投稿时使用 array 或 multirow 宏包等是可以的,这两个宏包已经加载了。也可以根据实际需求加载所需的宏包。

4.2 Normal tables (普通表格)

普通表格可以如下的方式使用:

type

\be \it ar b \it fo \b

```
\text{labular*}
\text{end{tabular*}
\text{end{table}}
```

Table 1								
This is a test caption. This is a test caption. This is								
test caption. This is a test caption.								
Col 1	Col 2	Col 3	Col4					

Col 1	Col 2	Col 3	Col4
12345	12345	123	12345
12345	12345	123	12345
12345	12345	123	12345
12345	12345	123	12345
12345	12345	123	12345

6 Thooram and thooram like anvironments

图 3: 普通表格效果示例

4.3 Span tables (跨栏表格)

跨栏表格可以这么用:

```
_ Code:13 __
   \begin{table*}[width=.9\textwidth,cols=4,pos=h]
       \caption{This is a test caption.}
       \begin{tabular*}{\\tblwidth}{@{} LLLLLL@{} }
        \toprule
         Col 1 & Col 2 & Col 3 & Col4 & Col5 & Col6 & Col7\\
        \midrule
         12345 & 12345 & 123 & 12345 & 123 & 12345 & 123 \\
         12345 & 12345 & 123 & 12345 & 123 & 12345 & 123 \\
         12345 & 12345 & 123 & 12345 & 123 & 12345 & 123 \\
         12345 & 12345 & 123 & 12345 & 123 & 12345 & 123 \\
10
         12345 & 12345 & 123 & 12345 & 123 & 12345 & 123 \\
11
        \bottomrule
12
       \end{tabular*}
13
     \end{table*}
14
```

Table 1

This is a cost caption.						
Col 1	Col 2	Col 3	Col4	Col5	Col6	Col7
12345	12345	123	12345	123	12345	123
12345	12345	123	12345	123	12345	123
12345	12345	123	12345	123	12345	123
12345	12345	123	12345	123	12345	123
12345	12345	123	12345	123	12345	123

and theorem-like environments with ease. In all commands

图 4: 跨栏表格示例

<u>5 Figures (图片)</u>

5.0.1 Normal figures (普通图片)

普通插图可以这么用:

```
\begin{figure}
\centering
\includegraphics[scale=.75]{Fig1.pdf}
\caption{The evanescent light - $1S$ quadrupole coupling

\($g_{1,1}$) scaled to the bulk exciton-photon coupling

\($g_{1,2}$). The size parameter $kr_{0}$ is denoted as $x$

\(\text{and the \PMS} is placed directly on the cuprous oxide sample

\(\phi\) ($\delta r=0$, See also Fig. \protect\ref{FIG:2}).}
\\label{FIG:1}
\end{figure}
```

5.0.2 Span figures (跨栏图片)

跨栏插图可以这么用:

```
\text{begin{figure*}
\text{centering}
\includegraphics[width=\textwidth,height=2in]{Fig2.pdf}
\text{caption{Schematic of formation of the evanescent polariton on

\( \text{inear chain of \PMS}. \) The actual dispersion is determined by
\( \text{the ratio of two coupling parameters such as exciton-\WGM} \)
\( \text{coupling and \WGM-\WGM coupling between the microspheres.}} \)
```

be

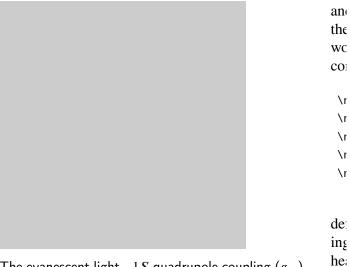


Figure 1: The evanescent light - 1S quadrupole coupling $(g_{1,l})$ scaled to the bulk exciton-photon coupling $(g_{1,2})$. The size parameter kr_0 is denoted as x and the PMS is placed directly on the cuprous oxide sample $(\delta r = 0$, See also Table 2).

options to further control graphic. \includegraphics is pro-

图 5: 普通插图效果



Figure 2: The evanescent light - 1.S quadrupole coupling $(g_{1,2})$ scaled to the bulk exciton-photon coupling $(g_{1,2})$. The size parameter kr_0 is denoted as x and the PMS is placed directly on the cuprous oxide sample $(\delta r = 0$, See also Table 2).

argument `1.', so that the item counter will be suffixed \ref{tiger} may be turned into a hyperlink to the figure it-

图 6: 跨栏插图效果

6 The position of figures and tables (表格和图片的位置)

通常我们在指定浮动体的规则时会 \begin{fibure}[htbp] 这样使用,但是模板修改了它的使用方法,修改后的使用方法如下:

```
Code:16

\begin{figure}[pos=htbp]

\includegraphics[width=0.85\textwidth]{imagefile}

\end{figure}
```

6.1 Theorem and theorem like environments (定理与定理类环境)

CAS 文档类为排版漂亮的定理以及其它类似的环境提供了便利的解决方法。\newtheorem 命令加上不同的可选参数得到的排版结果都是相同的。文档类文件提供了三个命令来 定制定理类环境。

1. \newtheorem 命令会将该环境内的字体用默认的 图_EX 的格式, 里面的字体将是意大利斜体, 定理的名字和定理的序号将以粗体展现。同时它还可以接受一个可选参数, 参数的内容会变成这个"定理"的名称。

```
\newtheorem{theorem}{Theorem}

\begin{theorem}\label{thm}

The \WGM evanescent field penetration depth into the

cuprous oxide adjacent crystal is much larger than the

\QE radius:

\begin{equation*}

\lambda_{1S}/2 \pi \left({\epsilon_{Cu20}-1}

\right)^{1/2} = 414 \mbox{\AA} \gg a_B = 4.6 \mbox{\mbox}{

\AA}

\end{equation*}

\end{theorem}
```

2. \newdefinition 除了里面内容是罗马体(直立体)以外, 其它与 \newtheorem 相同。例子如下:

```
Code:18 _______

newdefinition{definition}{Definition}

begin{definition}
```

```
The bulk and evanescent polaritons in cuprous oxide are

→ formed through the quadrupole part of the light-matter

→ interaction:

\text{begin}{equation*}

H_{int} = \frac{i e }{m \omega_{1S}} {\bf E}_{i,s} \cdot

→ {\bf p}

\end{equation*}

\text{end}{definition}
```

3. \newproof 命令用于定义证明的环境,并且不带计数器标号功能,下面是一个例子:

```
\newproof{pot}{Proof of Theorem \ref{thm}}
\begin{pot}

The photon part of the polariton trapped inside the \PMS moves

as it would move in a micro-cavity of the effective modal

volume $V\11 4 \pi r_{0}^{3} /3$. Consequently, it can

escape through the evanescent field. This evanescent field

essentially has a quantum origin and is due to tunneling

through the potential caused by dielectric mismatch on the

\PMS surface. Therefore, we define the \emph{evanescent}

polariton (\EP) as an evanescent light - \QE coherent

superposition.

\end{pot}
```

6.2 Enumerated and itemized lists (有序和无序列举)

CAS 提供了一些额外的列举环境的宏,使得用户的使用体验比 IMEX 默认的列举环境更好。\begin{enumerate} 可以带一个可选参数,可以改变默认的列举环境的编号的属性。可以通过下面的例子学习它的具体使用。

Theorem 1. The WGM evanescent field penetration depth into the cuprous oxide adjacent crystal is much larger than the OE radius:

Definition 1. The bulk and evanescent polaritons in cuprous oxide are formed through the quadrupole part of the lightmatter interaction:

$$\lambda_{1S}/2\pi \left(\epsilon_{Cu2O}-1\right)^{1/2}=414\,\mathring{A}\gg a_B=4.6\,\mathring{A}$$

$$H_{int} = \frac{ie}{m\omega_{1S}} \mathbf{E}_{i,s} \cdot \mathbf{p}$$

PROOF OF THEOREM 1. The photon part of the polariton trapped inside the PMS moves as it would move in a microcavity of the effective modal volume $V \ll 4\pi r_0^3/3$. Consequently, it can escape through the evanescent field. This evanescent field essentially has a quantum origin and is due to tunneling through the potential caused by dielectric mismatch on the PMS surface. Therefore, we define the *evanescent* polariton (EP) as an evanescent light - QE coherent superposition.

图 7: 定理、定义和证明的效果展示图

```
_ Code:20 _
   \begin{enumerate}[1.]
       \item The enumerate environment starts with an optional argument
                 so that the item counter will be suffixed by a period as in
           the optional argument.
           \item If you provide a closing parenthesis to the number in the
3
               optional argument, the output will have closing parenthesis
            → for all the item counters.
           \item You can use '(a)' for alphabetical counter and '(i)'
            → for roman counter.
           \begin{enumerate}[a)]
               \item Another level of list with alphabetical counter.
               \item One more item before we start another.
               \begin{enumerate}[(i)]
                    \item This item has roman numeral counter.
                    \item Another one before we close the third level.
10
               \end{enumerate}
11
           \item Third item in second level.
12
           \end{enumerate}
13
           \item All list items conclude with this step.
14
```

\end{enumerate}

- 1. The enumerate environment starts with an optional argument '1.' so that the item counter will be suffixed by a period as in the optional argument.
- 2. If you provide a closing parenthesis to the number in the optional argument, the output will have closing parenthesis for all the item counters.
- 3. You can use '(a)' for alphabetical counter and '(i)' for roman counter.
 - a) Another level of list with alphabetical counter.
 - b) One more item before we start another.
 - (i) This item has roman numeral counter.
 - (ii) Another one before we close the third level.
 - c) Third item in second level.
- 4. All list items conclude with this step.

图 8: 罗列环境使用效果图

7 Some other usage (其它使用)

定制了 highlights 环境用于强调某些东西,具体用法如下:

```
Code:21

| begin{highlights}
| item Research highlights item 1
| item Research highlights item 2
| item Research highlights item 3
| bend{highlights}
```

7.1 biography (传记)

bio 命令有如下的选项:

- 1. width: 作者照片的宽度, 默认值是 1in。
- 2. pos: 作者照片的位置

- Research highlights item 1
- Research highlights item 2
- Research highlights item 3

图 9: Highlights 环境使用图

具体使用例子如下:

```
\bio[width=10mm,pos=1]{tuglogo.jpg}
\textbf{Another Biography:}

Recent experimental \cite{HARA:2005} and theoretical

\( \cite{DEYCH:2006} \) studies have shown that the \WGM can travel

\( \text{along the chain as "heavy photons". Therefore the \WGM acquires} \)

\( \text{the spatial dispersion, and the evanescent quadrupole polariton} \)

\( \text{has the form (See Fig.\ref{FIG:3}):} \)

\( \text{endbio} \)
```

8 Appendix (附录)

附录要放在 \appendix 后面。

9 CRediT authorship contribution statement (作者贡献声明)

\printcredits 命令是在附录结束后面用的,用于展示作者们的贡献。作者贡献 角色在前言使用\credit标记。用如下的命令来申明每个作者的贡献:

```
\credit{Conceptualization of this study, Methodology, Software}
```

展现具体细节时使用 \printcredits, 例子如下:

```
Code:24

\author[1,3]{V. {{\=A}}}nand Rawat}[auid=000,

bioid=1,

prefix=Sir,

role=Researcher,
```

```
orcid=0000-0001-7511-2910]
5
   \cormark[1]
   \fnmark[1]
   \ead{cvr_1@tug.org.in}
   \ead[url]{www.cvr.cc, www.tug.org.in}
   \credit{Conceptualization of this study, Methodology, Software}
11
12
   \address[1]{Indian \TeX{} Users Group, Trivandrum 695014, India}
13
14
   \author[2,4]{Han Theh Thanh}[style=chinese]
15
16
   \author[2,3]{T. Rishi Nair}[role=Co-ordinator,
17
        suffix=Jrl
18
   \fnmark[2]
   \ead{rishi@sayahna.org}
20
   \ead[URL]{www.sayahna.org}
21
22
   \credit{Data curation, Writing - Original draft preparation}
23
24
    . . .
25
26
27
    \printcredits
```

CRediT authorship contribution statement

CV Radhakrishnan: Conceptualization of this study, Methodology, Software. **CV Rajagopal:** Data curation, Writing - Original draft preparation.

图 10: CRediT 展示图

10 Bioliography (参考文献)

如果一篇文章的 DOI 能够找到. 那就要写进 bib 文件中。

10.1 Bibtex

提供了两个参考文献的样式控制文件。model1-num-names.bst 是用数字排序的参看文献样式,引用时只能用 \cite{bibkey}。另一个是 model2-names.bst,用于作者年份的样式的参看文献,可以配合 natbib 宏包使用,注意此宏包已经加载了,无需使用者自己加载。但是加载时 number 作为默认的选项,因此要在 documentclass 处加上 authoryeat 选项。引用可以用如下几个指令: \citep{bibkey},

\citet{bibkey},\citealt{bibkey}等,更多具体的用法可以参考 natbib 的说明文档。如果使用 thebibliography 环境,每个引用都是一个 bibitem,并且每个 bibitem 对应唯一一个 bibkey,确保引用不会出现混乱。

10.2 Biblatex

参考文献的引用和生成推荐使用推荐使用 biblatex 宏包, 配合 biber 编译。 biblatex 提供了非常丰富的引用特性。

可以参考这个页面。

注意,如果使用 biblatex 的话,不要使用本文介绍的第一种编译方式,即 Terminal:1 中介绍的编译方式。但是 Terminal:2 的编译方式仍然有效。

虽然官方网页上推荐用 biblatex 的方式,但是官方给的模板中的示例却是 bibtex 的处理方式。因此个人建议,如果还不会使用 biblatex 的话还是用 bibtex 来处理吧,毕竟示例用的是它。