Using the Document Class phdsymp.cls

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Abstract—**This article explains how to use the LaTeX style recommended for the Proceedings of the FTW PhD Symposium. The article is itself an example of the phdsymp.cls style in action.**

Keywords—**Style file, LaTeX, FTW PhD Symposium**

I. Introduction

THE Symposium covers a wide range of topics and reflects the diversity of research activities at our Faculty, such as:

- Applied Physics
- Architecture
- Automation
- . . .

Authors who have prepared their articles using LaTeX can get them formatted in the style we would like to recommend for the Proceedings of the Symposium. The style file `phdsymp.cls` can be used together with the bibliography style file `phdsymp.bst`.

We recommend a *double column* style as this makes the article easier to read. The column width is 21 pica (approximately 90 mm). In this sample file you will find examples for the layout of displayed equations, theorems, tables, figures, etc.

II. How to Use the File phdsymp.cls

A. General Information

This style file has been written so to allow, with very few changes, the formatting of input that is suitable for the LaTeX `article` style. First, the `phdsymp.cls` style file has to be selected with a command of the form

```
\documentclass[twocolumn]{phdsymp}
```

The default font size is 10 points.

The Symposium Proceedings will not include author affiliations below or beside the name(s) of the author(s); instead, use the command `\thanks{...}` to list addresses. Note that the `\thanks{..}` command in the title no longer produce marks: the thanks-footnote should therefore be self-contained, with address and name of the author(s).

The command "`\PARstart{X}{YYY} ZZZ`" produces a large letter X at the beginning of the paragraph. The string `YYY` will be automatically changed to capital letters.

The bibliography style file `phdsymp.bst` allows BibTeX to include the references from the chosen bibliography file(s) according to the format recommended for the Symposium Proceedings.

Footnotes produce a footnote mark as usual.[1]

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[1] The footnote is indicated by a footnote mark

In figure **??** we can see an example for the definition of the title page and of the main commands needed to compile a LaTeX file with phdsymp.cls.

```
\documentclass[twocolumn]{phdsymp}

\usepackage{times}

\begin{document}

\title{Using the Document Class phdsymp.cls}

\author{Joris Thybaut
    \thanks{J.~Thybaut is...}}

\supervisor{Eric Laermans, Luc Dupr\'e}

\maketitle

\begin{abstract}
This article ...
\end{abstract}

\begin{keywords}
Style file...
\end{keywords}

\section{Introduction}
\PARstart{T}{he} Symposium ...

\bibliographystyle{phdsymp}
\bibliography{bib-file}

\end{document}
```

Fig. 1. Input used to produce this paper.

B. Additional Changes

Most changes resulting from the use of phdsymp.cls should be transparent to the user. For instance, captions for figures and tables have been modified. Caption of tables, however, should be defined before the table item.

B.1 Environments

The environments for theorem, propositions, lemmas, etc. can be defined with the usual LaTeX [**?**], [**?**] command `\newtheorem{..}{..}`. The proof environment is already defined.
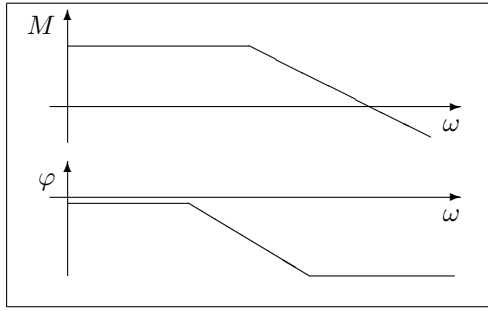
Fig. 2. This is a sample figure. The caption comes after the figure.

TABLE I
THE CAPTION COMES BEFORE THE TABLE.

	title page	odd page	even page
onesided	leftTEXT	leftTEXT	leftTEXT
twosided	leftTEXT	rightTEXT	leftTEXT

Theorem 1 (Theorem name) Consider the system

$$\begin{aligned} \dot{x} &= A.x + B.u \\ y &= C.x + D.u \end{aligned} \tag{1}$$

If A is stable, then the pair $\{A, B\}$ is stabilizable. Moreover, this holds for any B.

Proof: The proof is trivial. ∎

III. OPTIONAL FORMATTING

When you are happy with the *ultimate unequivocal final version*, you may perform following additional changes, although this is certainly not necessary.

A. "Hard-Coding" Symbolics

Change the symbolics so that the file actually contains the reference numbers *i.e.* "... \cite{fred:88} ..." should be changed to "... [3] ...". One author (who used the style file) did a smart thing *after* he had decided upon a final version. He put his \cite{..} command and other symbolics on a line on their own and commented them out (from the formatting) by putting a % sign before each symbolic. Then, on the next line he just inserted the copy-matching numerical, like this:

```
Well, according the Fred Bloggs
%\cite{fred:88}
[24]
the value of $\alpha$ should be even
greater than what we think it should be.
```

Thus, *he* knows he put in the correct (copy-matching) numerical and the publishing staff can send him back an author-proof that correctly matches his submission. This is not so useful here as we do not expect you to send the LATEXfile, but a PDF-version of your article.

The above also applies to the referencing of table and figures (and any "auto-numbering" feature, standard or synonymous with your system).

Figure captions can be part of the text (in between paragraphs) like this:

```
And in Fig. 3 we see that the
value of $\alpha$ increases exponentially.

    Fig. 3\quad This is the caption for
    figure 3 showing some $\alpha$.

And after the caption we continue on
with the next paragraph, like this.
```

In essence, by you actually putting in the *correct copy matching* numericals so that no problems arise with incomplete files being sent to the transactions (the wrong *.bib, *.bbl files, the wrong versions of figures etc). Also, and more importantly, the numbers that are on your hard-copy (and in the reviewer's hands) will be the same ones that you receive in your author proof. Again, this is not so useful here as we do not expect you to send the LATEXfile, but a PDF-version of your article.

B. Including the Bibliography into the LATEX Source File

You can reduce the number of files you have to send to the publishers in the following way. Run BIBTEX on the *.aux file. This creates a *.bbl file: include this into your LATEX source file at the place where you defined the \bibliography{..} command and comment this command out. Remove the *.bbl file. Then, your LATEX file will include all the necessary information about your bibliography and no *.bbl or *.bib file will be needed.

This may seem like an awful lot of work... but not really.. This will allow to process your paper quickly and efficiently, and assure you that what you send in *will* actually be sent back to you without mistakes (cites, refs etc.).

However, this would only have been useful if you had been requested to send the LATEXfile itself instead of a PDF-version of the article.

IV. CONCLUSIONS

This sample article has presented the style file phdsymp.cls This file can be especially useful in preparing articles for submission to the FTW PhD Symposium.

ACKNOWLEDGMENTS

The authors would like to acknowledge the suggestions of many people.

REFERENCES

[1] Leslie Lamport, *A Document Preparation System: LATEX, User's Guide and Reference Manual*, Addison Wesley Publishing Company, 1986.
[2] Helmut Kopka, *LATEX, eine Einführung*, Addison-Wesley, 1989.
[3] D.K. Knuth, *The TEXbook*, Addison-Wesley, 1989.
[4] D.E. Knuth, *The METAFONTbook*, Addison Wesley Publishing Company, 1986.