An Example for the Usage of the birkjour Class File

Birkhäuser Publishing Ltd. and A Second Author

To my boss

Abstract. The aim of this work is to provide the contributors to journals or to multi-authored books with an easy-to-use and flexible class file compatible with LaTeX and $\mathcal{AMS}$-LaTeX.

Mathematics Subject Classification (2010). Primary 99Z99; Secondary 00A00.

Keywords. Class file, journal.

1. Document Preamble

Start the article with the command

```
\documentclass{birkjour}
```

After that, needed macro packages and new commands can be inserted as in every LaTeX or $\mathcal{AMS}$-LaTeX document. Don't use commands that change the page layout (like `\textwidth, \oddsidemargin` etc.) or fonts.

2. Frontmatter

The command

```
\begin{document}
```

starts – as always – the article.

2.1. Author Data

Afterwards, insert title, author(s) and affiliation(s), as in the source file to this document, `bjourdoc.tex`. E.g.,

```
\title[An Example for birkjour]
 {An Example for the Usage of the\\ birkjour Class File}
%---------Author 1
\author[Birkh\"auser]{Birkh\"{a}user Publishing Ltd.}
\address{%
Viaduktstr. 42\\
P.O. Box 133\\
CH 4010 Basel\\
Switzerland}
\email{info@birkhauser.ch}
```

For each author the commands `\author`, `\address` and `\email` should be used separately. See the last page of this document for the typesetting layout of the above addresses.

2.2. Abstract, Thanks, Key Words, MSC

The `abstract` environment typesets the abstract:

```
\begin{abstract}
The aim of this work is to provide the contributors to edited
books with an easy-to-use and flexible class file compatible
with \LaTeX\ and \AmS-\LaTeX.
\end{abstract}
```

In addition, the Mathematical Subject Codes, some key words and thanks can be given:

```
\thanks{This work was completed with the support of our
\TeX-pert.}
\subjclass{Primary 99Z99; Secondary 00A00}
\keywords{Class file, journal}
```

Finally, `\maketitle` typesets the title.

3. Mainmatter

Now type the article using the usual LaTeX and (if you need them) $\mathcal{AMS}$-LaTeX commands.

We gratefully appreciate if the text does not contain `\overfull` and/or `\underfull` boxes, if equations do not exceed the indicated width, if hyphenations have been checked, and if the hierarchical structure of your article is clear. Please avoid caps and underlines.

Just to give examples of a few typical environments:

Definition 3.1. This serves as environment for definitions. Note that the text appears not in italics.

$$\text{This is a sample equation: } c^2 = a^2 + b^2 \tag{3.1}$$

The above equation received the label `testequation`.

Theorem 3.2 (Main Theorem). *In contrast to definitions, theorems appear typeset in italics as it has become more or less standard in most textbooks and monographs. Equations can be cited using the* `\eqref` *command which automatically adds brackets:* `\eqref{testequation}` *results in* (3.1).

Proof. A special environment is predefined: the *proof* environment. Please use

`\begin{proof}`

proof of the statement

`\end{proof}`

for typesetting your proofs. The end-of-proof symbol □ will be added automatically. □

There are two known problems with the placement of the end-of-proof sign:

1. if your proof ends with a s i n g l e displayed line, the end-of-proof sign would be placed in the line below; if you want to avoid this, write your line in the form

   `$$displayed math line \eqno\qedhere$$`

   which results in

   Proof.

   $$displayedmathline \qquad\qquad\qquad\qquad\qquad\qquad □$$

2. if your proof ends with an aligned displayed environment, the command `\tag*{\qed}` can be used to place the end-of-proof sign properly:

   `\begin{align*}`
   `\alpha&=\beta+\gamma\\`
   `&=\delta+\epsilon\tag*{\qed}`
   `\end{align*}`

   results in

   $$\begin{aligned} \alpha &= \beta + \gamma \\ &= \delta + \epsilon \end{aligned} \qquad\qquad □$$

Please try to avoid using the obsolete `\eqnarray` environment. This environment has several bugs and has been replaced by the more flexible $\mathcal{AMS}$ environments `align, split, multline`.

Remark 3.3. Additional comments are being typeset without boldfaced entrance word as they may be minor important.

Example. For some constructs, even no number is required.

Displayed equations may be numbered like the following one:

$$\sqrt{1 - \sin^2(x)} = |\cos(x)|.$$ (3.2)

3.1. Here is a Sample Subsection

Just needed because next thing is

3.1.1. Here is a Sample for a Subsubsection. One more sample will follow which clearly shows the difference between subsubsection deeper nested lists: **Here is a Sample for a Paragraph.** As you observe, paragraphs do not have numbers and start new lines after the heading, by default.

3.2. Indentation

Though indentation to indicate a new paragraph is welcome, please do not use indentation when the new paragraph is already marked by an extra vertical space, as for example in the case of the first paragraph following a heading (this is standard in this class), or after using commands like \smallskip, \medskip, \bigskip etc.

3.3. Figures

Please use whenever possible figures in EPS format (encapsulated postscript). Then, you can include the figure with the command

\includegraphics{figure.eps}

It is sometimes difficult to place insertions at an exact location in the final form of the article. Therefore, all figures and tables should be numbered and you should refer to these numbers within the text. Please avoid formulations like "the following figure...".

3.4. Your Own Macros

If you prefer to use your own macros within your document(s) please don't forget to send them to us together with the source files for the manuscript. We will need all these files to produce the final layout.

4. Backmatter

At the end of the document, the affiliation(s) will be typeset automatically. For this it is necessary that you used the \address command for including your affiliation, as explained above.

Acknowledgment

Many thanks to our TEX-pert for developing this class file.

References

[1] A. B. C. Test, *On a Test.* J. of Testing **88** (2000), 100–120.

[2] G. Grätzer, *Math into LaTeX.* 3rd Edition, Birkhäuser, 2000.

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