Standard Poster Talks for MPS with LaTeX

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This paper describes the LaTeX 2_ε class `mps-poster`
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Summary

The stripped version of this file contains the following brief description:

```
% Use to make posters on A4 paper, which can be sent to A1/A0 printer with
% magnification. Abstract in 2 columns, text in 2 or 3 automatically
%
% Loads packages  color, graphicx and multicol directly
% Also uses the txfonts package
% Must manually load (optionally) natbib, epsfig etc
% Class options:
%   portrait (default) for portrait format, and two columns
%   landscape wide, and three columns;
%   sans  (default) a sans serif font is used
%   roman      roman (normal) font is used for text
%   margin=<len>  sets the margin size, default 1cm
%   a3paper, a2paper, a1paper, a0paper are other size options, default a4paper
%
% Extra commands:
%   \posternumber[r|l]{text}   adds text to upper right or left (def) corner
%                              of first page
%   \meeting{text}    adds text to bottom of last column of last page.
%
% Normally figure and table environments do not work within multicols, but
% here they are fixed up. However, they do not float, but appear there where
% placed, causing spacing problems. Must manually adjust.
```

1 Introduction

This is a special LaTeX class for MPS poster talks. The idea is to have uniform appearance for all MPS talks.

This class is an updated version of the previous MPAe class, `mpposter`, which it replaces. It produces a header with the MPS logo along with the MPG Minerva logo.

The text is prepared as for normal LaTeX, with only two extra commands for inputting information (poster number and name of meeting). This means that the same text may be used for producing preprints or camera-ready copy with a minimum of changes.

The output is 10 pt text on a sheet that is nominally A4 size, which can then be printed on A1 or A0 with the appropriate scaling. To go from A4 to A1 requires a magnification of 2.828, meaning the text is effectively 28 pt. If this is too large, one could select A3 paper with the `a3paper` option, in which case the magnification is only a factor of 2, allowing more text per page. (It is actually easier to program for larger paper than for smaller text.) See section 9 below.

2 Invoking the Class

This class in invoked by using it in place of `article` or whatever other class is normally used.

`\documentclass[`⟨*options*⟩`]{mps-poster}`

The following options may be employed:

`portrait` (default) switches to portrait format, and uses 2 columns for the text;

`landscape` switches to landscape format; the number of columns for the text is set to 3;

`sans` (default) uses a sans serif font for the text;

`roman` uses regular roman font for the text;

`margin=`*len* sets the margin size for all 4 sides, default 1 cm;

`a`*n*`paper` where *n*=0, 1, 2, 3, 4, 5, 6, to select the paper size; default is `a4paper`.

3 Other Packages

The `mps-poster` class automatically loads the packages

`color`, `graphicx`, `multicol`, `geometry`, and `txfonts`

Any other packages must be loaded manually with `\usepackage`.

4 Header Information

`\title` `\author` Information to be put into the header are the title and authors, done with the regular LaTeX commands

```
\title{⟨title text⟩}
\author{⟨author names⟩}
```

`\thanks` To add any non-MPS affiliations as footnotes, the `\thanks` command may be used within the argument of `\author` (standard LaTeX), e.g.,

```
\author{P. W. Daly and
    J. D. Smith\thanks{At MPE, Garching}}
```

Both `\title` and `\author`, as well as `\posternumber` below, must be given in the preamble, before `\begin{document}`, because that is when the header is output so the information must be known at that time.

5 Extra Commands

There are two non-standard commands for adding additional information, both are optional.

`\posternumber` To add the poster number at the top of the first page, give

```
\posternumber[⟨pos⟩]{⟨text⟩}
```

where *pos* is `l` or `r` for left/right. Default is left. The *text* is printed in the selected position.

`\meeting` With

```
\meeting{⟨text⟩}
```

one can place some text in small typeface at the bottom of the last column on the last page; this is meant to note the meeting at which the poster was presented.

`\startcols` `\stopcols` The main text is set in 2 or 3 columns, initiated automatically at the start of the document. However, it might be desired to break the columns in the middle of the page, or to insert a wide figure across the whole width. In this case, one can issue

```
\stopcols ... \startcols
```

Note that if `\startcols` is not given, there will be an error message at the end of the document where an automatic `\stopcols` is inserted.

6 User Configurations

\MPcols The number of columns for the text is either 2 or 3 depending on portrait or landscape mode. One can change this by redefining `\MPcols` with `\renewcommand`.

\MPfigfont A font declaration can be issued for the figure and table captions. This can be redefined by the user. Default is a colour:

```
\renewcommand{\MPfigfont}{\color{capcol}}
```

\geometry Since `mps-poster` uses the `geometry` package, its formatting command `\geometry` may be used for any special effects. About the only one I can imagine would be to set the horizontal margins differently from the vertical ones. For example:

```
\geometry{hmargin=2mm,vmargin=1cm}
```

Other keywords are `top=`, `bottom=`, `left=`, `right=`. (These could also be put into the `\documentclass` options.) The `\geometry` command must be given in the preamble, before `\begin{document}`.

The colours for sections and captions may also be redefined by the user.

`abscol`	is the colour of the abstract name
`seccol`	is the colour of the section titles
`subseccol`	is the colour of the subsection titles
`subsubseccol`	is the colour of the subsubsection titles
`capcol`	is the colour of the figure and table captions

These can be redefined as one wants, e.g.

```
\definecolor{capcol}{named}{WildStrawberry}
```

7 Other Considerations

The document should be made up as follows:

- Start with `\documentclass[`⟨*options*⟩`]{mps-poster}`.
- Enter title and authors with the `\title{`⟨*title_text*⟩`}` and `\author{`⟨*authors_names*⟩`}` as usual. The `\date` command will be ignored.
- Enter optionally `\posternumber[`⟨*pos*⟩`]{`⟨*Number_text*⟩`}` and `\meeting{`⟨*meeting_name*⟩`}`.
- Any other preamble declarations, then `\begin{document}`.
- Issue `\maketitle` to print MPS heading, title, authors, poster number at top of first page.

- Give the (optional) abstract with

  ```
  \begin{abstract}
    abstract text
  \end{abstract}
  ```

- Start the main text (in 2 or 3 columns) with the first `\section` command.

- Place figures and tables with `\begin{figure}` and `\begin{table}` as usual. However, they will not float, but will be placed right there in the text, causing unwanted column/page shifts. The author must massage the positioning himself.

  (This is a feature of the `multicols` environment that does not allow floats.)

- Add citations and reference lists as usual.

- End with `\end{document}`.

8 Sample Poster

The following input demonstrates the essentials of a poster LaTeX file.

```
\documentclass[a2paper,margin=2cm]{mps-poster}
% Alternative:
% \documentclass[landscape,a1paper,roman]{mps-poster}

\posternumber[r]{Poster Number 1234}
\meeting{20th Anniversary Symposium}

\title{Overview of Recent Highlights}
\author{P. W. Daly, J. G. Smith\thanks{At MPE Garching},
   F. C. Collins\thanks{Retired}}

\begin{document}
\begin{abstract}
  .........
\end{abstract}
\section{Introduction}
............
\stopcols

Just an intermezzo!

\startcols
\section{Continued}
............
```

```
\end{document}
```

The resulting header appears thus:

9 Printing the final poster

The regular output is to A4 paper, but the final result is meant to be magnified to A0 or A1.

The easiest way to do this is to produce PDF output (best with pdfLaTeX, or alternatively with PS converted to PDF). This can be viewed with Acrobat (Reader) and then sent to an A1 printer with the option 'fit to page'. The magnification occurs automatically.

It might be that the amount of material on an A4 page is too little and the magnified text far too large (28 pt on A1). To reduce the text size, one can print instead on A3 or even A2 paper, still with 10 pt text, and then expand that to A1 or A0. For finer tuning, the text size can selected with the regular options `11pt` and `12pt`.