Manual for Preparation of Posters of any size using `sciposter.cls` V. 1.18

Michael H.F. Wilkinson
Institute for Mathematics and Computing Science, University of Groningen

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1 Introduction

The LaTeXclass file `sciposter.cls` has been developed to make life easier for those developing posters for conferences. It defines paper sizes, appropriate font size, title styles, logos etc., to enable the author of an article (in LaTeX) to cut and paste content from the article into a poster. It also redefines certain environments in a way compatible with the `sciposter` class. These environments are `figure`,`subfigure`,`table`, and `algorithm`. In the current version `sciposter.cls` is intended for use with both standard LaTeX and pdfLaTeX. It has been derived from `IWIposter.cls` version 1.16, and has all its functionality except for the predefined logos and institute name, which are specific to the IWI (Institute for Mathematics and Computing Science, University of Groningen). Because all `sciposter.cls` commands are valid in `IWIposter.cls`, this manual also applies to that class file. Anyone using the new `IWIposter.cls` version 2.0 and upwards should also have `sciposter.cls` in their TeX directory. Anyone making posters within the University of Groningen can best use the `IWIposter.cls`, and change the institute name.

The file `sciposter.cls` comes in an archive `sciposter.tgz` which also contains a number of supporting files (README, style files, etc.), an example in directory `sciposterexample`, and this manual. To learn more about the use of this class file, please refer to `sciposter-example.tex`, which demonstrates a number of features of the package.

2 Installation

Installation of the package only concerns unpacking the archive in a directory of your choice. It is most convenient to unpack the archive in a directory included in the `TEXINPUTS` environment variable (at our institute, in your `.TeX` directory in your home directory). Unpacking is done using the command:

```
tar -xzf sciposter.tgz
```

3 Titles and page layout

As any LaTeXclass file, simply type:

```
\documentclass{sciposter}
```

at the start of your manuscript, and use commands such as `\title`, and `\maketitle` as usual. The `\author` can be used as ever, though it is better to enter only the author names, and specify the authors institute using a separate command `\institute`. A further command `email` is available to specify email addresses (or URLs). By default there is space to the left and right of the title for a logo. Default settings are no logos, but space reserved. These settings can be changed using the commands:

`\institute`	has single parameter to set institute address.
`\leftlogo`	has one optional parameter for the width of the logo, and one mandatory parameter for left logo file (with or without extension).
`\rightlogo`	has one optional parameter for the width of the logo, and one mandatory parameter for right logo file (with or without extension).
`\noleftlogo`	same as `\leftlogo{}`, but also widens space available for title.
`\norightlogo`	same as `\rightlogo{}`, but also widens space available for title.
`\nologos`	same as `\noleftlogo \norightlogo`

The width of the logos is set relative to the space reserved, i.e., values between 0 and 1 are expected (default 1). Thus, if we have put

```
\leftlogo[0.52]{RuGlogo}
\title{Generalized Pattern Spectra Sensitive to Spatial Information}
\author{Michael H.F. Wilkinson}
\institute{Institute for Mathematics and Computing Science\\
          University of Groningen, P.O. Box 800, 9700 AV Groningen,
          The Netherlands}
\email{michael@cs.rug.nl}
```

in the preamble, we obtain:

Generalized Pattern Spectra Sensitive to Spatial Information

Michael H. F. Wilkinson
Institute for Mathematics and Computing Science,
University of Groningen, PO Box 800, 9700 AV Groningen, The Netherlands
michael@cs.rug.nl

The text font size of the title, author, and institute address can be controlled by redefining the commands `\titlesize`, `\authorsize`, and `\instsize`, respectively, e.g:

```
\renewcommand{\titlesize}{\huge}
\renewcommand{\authorsize}{\Large}
\renewcommand{\instsize}{\large}
```

Sets up a title with size `\huge`, author in size `\Large`, and institute address in size `\Large`. Other effects such as italics can be added as well.

All the above commands should be given before `\maketitle`.

Footer. By default, the `sciposter` class uses an `empty` page layout (no header or footer). However, the following command allows you to enter a footer line indicating the conference where the poster will be presented:

`\conference` has single parameter to specify conference

In the file `sciposter-example.tex` we have:

```
\conference{{\bf ICPR 2002}, 16th International Conference on
  Pattern Recognition, 11-15 August 2002, Qu\'ebec City, Canada}
```

The footer can also be embellished with a logo in the lower right corner (by default) of the poster, as part of the footer. At this point in time, it can only be changed by redefining the `\footlogo` command. As an example, the `\footlogo` used at our institute is inserted using the command:

```
\renewcommand{\footlogo}{%
  \resizebox{\logowidth}{!}{%\includegraphics{RuGbalkBl.png}}%
}
```

This is feasible because it is a an oblong of height:width ratio of about 1:4.75. To create a narrower logo use a fraction of the `\logowidth` instead, e.g. `0.5\logowidth`. This automatically rescales with the paper size and the sizes of the top logos.

As of version 1.18, the conference indication and footer logo can be swapped, using the command `\LEFTSIDEfootlogo`. This puts the footer logo to be put in the left bottom corner, and the conference (if used) in the right bottom corner. If other effects are desired, these can be achieved either by using the `fancyhdr.sty` package by Piet van Oostrum, or redefining the `\@oddfoot` command yourself.

Main contents. After the title has been set up, it is common practice to use the `multicols` environment to fill the rest of the page. For portrait posters at A0 paper size, 3 columns is preferred, for landscape at the same size, 5 is most appropriate. Note however that the user may use the space between title and footer in any other way. Currently I often use the `sectionbox.sty` package to organize the content of the poster (see `www.ctan.org`). This can be used in conjuction with the `multicols` environment (but set the rule separating the columns to zero width), or (for more freedom) the `textpos.sty` package by Norman Gray (see `www.ctan.org`).

Page margins. By default, the page margin is 6% of the smallest dimension of the paper all round. To facilitate easy alteration of the page margins, an extra command `\setmargins`, which has one optional parameter, has been introduced in version 1.17. By default this sets the page margin to the default value. To set all the page margins to e.g. 2 cm just specify

```
\setmargins[2cm]
```

before `\begin{document}`.

Paragraph indents. The indent of the first line of a paragraph is set to 0 pt by default in `sciposter.cls`. Before version 1.17, choosing other values using, e.g.

```
\setlength{\parindent}{2em}
```

resulted in undesirable shifts in the "floating" environments `figure`, `table`, and `algorithm` (see next section). As of version 1.17, this has been corrected.

Drop caps. In previous versions of this class file, a drop caps command for fancy starts to paragraphs were implemented using the `\PARstart` command copied from the `IEEEtran.cls` class file, e.g.

```
\PARstart{D}{rop caps} are a way to
embellish the beginning of a paragraph
```

DROP CAPS are a way to embellish the beginning of a paragraph.

However, the implementation caused problems when an environment was opened in the paragraph containing the drop cap. This problem has been resulved by using the `lettrine.sty` package of Daniel Flipo.

4 Environments defined by the class

The following environments have been (re)defined in the class file:

`abstract`	Section header conforming to settings and italics body.
`figure`	no longer floating because that would not make sense in a poster.
`table`	no longer floating.
`algorithm`	no longer floating (note: do not include `algorithm.sty`).

As a consequence of the redefinition of `figure` the command `\subfigure` has been redefined. Therefore, do not include package `subfigure.sty`. All redefinitions adhere to the original syntax, and as closely as possible to the original meaning.

4.1 Customizing captions in floats

As of version 1.15, `\caption` has an extra, optional parameter, which indicates the fraction of the current column width taken up by the caption (default 1). Thus

```
\caption[0.5]{A narrow figure caption}
```

creates a caption only half the width of the column. This can be used to fit the caption in a 2 row by 2 column tabular containing three images.

Captions in the "floating" environments all consist of two parts: the caption start, specified by the `\capstart` command, and the caption body text. In the `figure` environment the `\capstart` command is defined as:

```
\renewcommand{\capstart}{%
  \figcapstartstyle{\figurename\nobreakspace\thefigure:}%
}
```

As of version 1.17, the captions are customizable in various ways. First of all, the new version uses `\figurename`, `\tablename`, and `\algorithmname` to decide what the `\capstart` part should start with, for figures, tables, and algorithms, respectively. The `\figurename` and `\tablename` command are redefined by the language of the document, so that the `babel` package is properly supported by `sciposter` now. Because no support for changing `\algorithmname` is available in `babel`, changing the first word in `\capstart` for algorithm to the appropriate one for the language of choice can be done by redefining `\algorithmname` in the usual way, e.g. for Dutch, add

```
\renewcommand{\algorithmname}{Algoritme}
```

to the document preamble (or at least before the first use of the `algorithm` environment).

The style in which the caption start appears is controlled by the following commands:

`\mastercapstartstyle`	Controls appearance of all caption starts by default. Default defined as `\textbf{#1}`
`\figcapstartstyle`	Style of caption start for figure.
`\tablecapstartstyle`	Style of caption start for table.
`\algcapstartstyle`	Style of caption start for algorithm.

These can be redefined, but please note they should always be redefined as commands with a single parameter, e.g.

```
\renewcommand{\mastercapstartstyle}[1]{\textit{\textbf{#1}}}
\renewcommand{\algcapstartstyle}[1]{\textsc{\textbf{#1}}}
```

for ***bold italics*** for all caption starts, followed by a redefinition of the algorithm caption start style to **BOLD SMALL CAPS**.

The style of the body text of a caption is controlled by the following commands:

`\mastercapbodystyle`	Controls appearance of all caption bodies by default. Default defined as `\itshape`
`\figcapbodystyle`	Style of caption body for figure.
`\tablecapbodystyle`	Style of caption body for table.
`\algcapbodystyle`	Style of caption body for algorithm.

Note that these commands do not have any parameters. The different definition from the caption start commands ensures that caption bodies containing paragraph breaks are allowed. The defaults can be changed in the usual way, e.g.,

```
\renewcommand{\algcapbodystyle}{\bfseries}
```

changes the algorithm caption bodies to boldface.

Again, as of version 1.17, the appearance of the figure, table and algorithm counters can be modified in a more natural LaTeX way. Rather than using hard-coded Arabic numerals, the appearance of the `figure`, `table`, and `algorithm` counters are controlled by the corresponding `\thefigure`, `\thetable`, and `\thealgorithm`. For example

```
\renewcommand{\thealgorithm}{\Roman{algorithm}}
```

changes the algorithm counter to uppercase Roman numerals. All these examples are available in the `sciposter-example.tex` file (commented out).

5 Controlling print colours

The class file includes package `color` to allow control over print colours. The following colours have been defined:

`mainCol`	background colour (default white)
`TextCol`	normal text colour (default black)
`SectionCol`	section header colour (default black)
`BoxCol`	section box colour (default light grey)

They can be defined be commands such as:

```
\definecolor{mainCol}{rgb}{1,1,1}
\definecolor{BoxCol}{rgb}{0.9,0.9,1}
\definecolor{TextCol}{rgb}{0,0,0}
\definecolor{SectionCol}{rgb}{0,0,0}
```

These commands set up the defaults for `IWIposter.cls`. Note that these definitions must be made *before* `\begin{document}`.

6 Class Options

6.1 Paper-size options

In this class, paper sizes also change the default font size. The class options controlling paper size implemented within `sciposter.cls` are:

ISO A series:	
`a0`	ISO A0 paper size (83.96cm $\times$ 118.82cm); normal font size 25pt.
`a1`	ISO A1 paper size (59.4cm $\times$ 83.96cm); normal font size 20pt.
`a2`	ISO A2 paper size (41.98cm $\times$ 59.4cm); normal font size 17pt.
`a3`	ISO A3 paper size (29.7cm $\times$ 41.98cm); normal font size 14pt.
ANSI Sizes:	
`ansiE`	ANSI E paper size (86.36cm $\times$ 111.76cm); normal font size 25pt.
`ansiD`	ANSI D paper size (55.88cm $\times$ 86.36cm); normal font size 20pt.
`ansiC`	ANSI C paper size (43.18cm $\times$ 55.88cm); normal font size 17pt.
`tabloid`	Tabloid, a.k.a. ledger, a.k.a. ANSI B paper size (27.9cm $\times$ 43.18cm); normal font size 14pt.

This version also supports "external" paper-size specification, through files which have names of the form `paper<type>.cfg`, e.g. `paperb0.cfg` for ISO B0.

ISO RA series:	
`ra0`	ISO RA0 paper size (untrimmed A0: 86cm $\times$ 122cm); normal font size 25pt.
`ra1`	ISO RA1 paper size (untrimmed A1: 61cm $\times$ 86cm); normal font size 20pt.
`ra2`	ISO RA2 paper size (untrimmed A2: 43cm $\times$ 61cm); normal font size 17pt.
ISO B series:	
`b0`	ISO B0 paper size (100.0cm $\times$ 141.4cm); normal font size 30pt.
`b1`	ISO B1 paper size (70.7cm $\times$ 100.0cm); normal font size 25pt.
`b2`	ISO B2 paper size (50.0cm $\times$ 70.7cm); normal font size 20pt.
`b3`	ISO B3 paper size (35.4cm $\times$ 50.0cm); normal font size 17pt.
Custom Sizes:	
`custom`	Edit file `papercustom.cfg` to specify any type of paper (see below).

All font sizes are approximate (see section 6.2 for exact sizes). All title, author, institute, section and subsection header sizes are set accordingly. Defaults are `a0` and `portrait`. ISO RA0–RA2

```
% file papercustom.cfg, M.H.F. Wilkinson
% custom paper support
% for sciposter.cls v1.10 and higher
% edit pointsize, width, height, and fontsize parameters as needed
% DO ensure that values in the \special commands match!
\renewcommand{\papertype}{custom}
\renewcommand{\fontpointsize}{25pt}
\setlength{\paperwidth}{86cm}
\setlength{\paperheight}{180cm}
\renewcommand{\setpspagesize}{
  \ifthenelse{\equal{\orientation}{portrait}}{
    \special{papersize=86cm,180cm}
    }{\special{papersize=180cm,86cm}
    }
  }
```

Figure 1: Custom paper specification file as provided in the package.

have been included because several printers have rolls of 86 cm or 61 cm wide. The `a0b` options inherited from `a0poster.cls` in the distant past has been removed. An important new feature is the possibility to add new paper sizes by creating new `paper<type>.cfg` files (e.g. for ISO C-series paper). A special file `papercustom.cfg` (see Figure 1) is provided for one-off runs on special sizes. Simply change the `\paperheight`, `\paperwidth`, and `\fontpointsize` according to your preferences, and set the correct values for height and width in the `\special` commands accordingly. File `papercustom.cfg` can also be copied to create some new `paper<type>.cfg`. In this case it is best to change

```
\renewcommand{\papertype}{custom}
```

to

```
\renewcommand{\papertype}{<type>}
```

Finally, orientation specification is through the following options:

Orientation:

`landscape`	sets paper orientation to landscape.
`portrait`	sets paper orientation to portrait.

6.2 Font options

Font sizes can be controlled through the following options:

`14pt`	normal font size 14.4pt.
`17pt`	normal font size 17.28pt.
`20pt`	normal font size 20.74pt.
`25pt`	normal font size 24.88pt.
`30pt`	normal font size 29.86pt.
`36pt`	normal font size 35.83pt.
`largefonts`	select normal font size of paper size one step above current paper size (for `a0` it becomes 30pt).

Note that the explicit point settings overrule the `largefonts` option.

6.3 Section header format

Three section heading options exist in the class file:

`boxedsections`	Section headers within shadow boxes of colour `BoxCol`
`plainboxedsections`	Section headers within plain boxes of colour `BoxCol`
`ruledsections`	Underlined section headers
`plainsections`	Plain (left-aligned) section headers

The default is `boxedsections`. Further control over the section headers can be exerted by redefining the `\sectionsize` and `\subsectionsize` commands. For example, the commands

```
\renewcommand{\sectionsize}{\Large}
\renewcommand{\subsectionsize}{\large \textcolor{\SectionCol}}
```

create `\Large` section headers and `\large` subsection headers with the same colour as section headers.

6.4 Print style options

Finally, there are options regarding print style:

`draft`	causes draft version to be generated (affects only graphics).
`final`	causes final version to be made.

Default is `final`.

7 Dependencies and Conflicts

Class `sciposter` requires the following packages:

- `a0size`
- `boxedminipage`
- `color`
- `graphics`
- `ifthen`

- `lettrine`
- `shadow`
- `times`

Most of these packages are either part of the standard LaTeXdistribution or can be obtained from `www.ctan.org`. Not required, but designed for use with this class is `sectionbox.sty` which allows placement of ((sub)sub)sections in fancy boxes with difference colours, package `textpos.sty` which allows absolute positioning of boxes of any kind on the page, and package `wallpaper.sty` which can be used to include one or more images as background to your poster. All these packages are available from `www.ctan.org`.

Known conflicts exist with the following packages:

`a4` Defines A4 paper size: obviously not compatible with A0 posters.

`a4wide` Similar to above, sets A4 paper size (using `a4.sty`).

`algorithm` The algorithm environment is a floating environment, not compatible with the `sciposter` class. However, it is defined in the class itself.

`subfigure` Subfigures are redefined in the class, to be compatible with the internal (non-floating) figure environment.

Any other class redefining paper size may come into conflict with the `sciposter` class. Similarly, any other class using the float environments may come into conflict with this class.