

# Instructions for FEniCS book authors

October 28, 2010

## General instructions

- Carefully read the comments from the referees and editors and update your chapter accordingly. Send a detailed response to the referee comments along with your revised chapter.
- Make sure to run a spell-checker (American English) before you submit your chapter.
- Make sure that all references are complete and accurate and that your chapter compiles without warnings.
- Submit your book chapter as a patch against the latest book repository. Note in particular that the style files for the book have changed, so changes should be made relative to the latest version of your chapter in the book repository (not your local copy). Note that your chapter may already have gone through some minor modifications in order to compile against the new style files.
- Along with your submission, supply a short text for your affiliation, including your email address and any funding acknowledgments. Your affiliation will be added to an appendix of the book that lists the affiliations of all authors.
- Make sure to browse through all other chapters and add appropriate references to other relevant chapters.

## Specific typesetting instructions

- Avoid excessive use of  $\text{\LaTeX}$  macros in chapters. Not only does it complicate editing if for example `\begin{itemize}` is replaced by `\bit`, but it may also conflict with macros defined in other chapters. If it is necessary to define macros, then prefix the macros with the chapter prefix, or ask the editors to add them globally.

- Justify your text (line-breaking) and make sure it looks clean. In Emacs, this can be handled by `M-x auto-fill-mode` or pressing `M-q` on each paragraph.
- Use `~` in references and citations: `... in~\ref{...}, ... in~\cite{...}`.
- Chapters should be referred to using `Chapter~\ref{chap:prefix}`, where `prefix` is the chapter prefix.
- Use `\eqref{}` to refer to equations. A typical usage would be  
It follows from~\eqref{eq:hoffman-1:ns} that....
- All chapter labels should be prefixed with the type of label and the chapter prefix, for example `fig:hoffman-1:foo` or `tab:narayanan:bar`.
- Use the environments `\begin/end{python}` and `\begin/end{c++}` to typeset Python and C++ code.
- The book must be built using `pdflatex` (to work with the new style files). This means that EPS figures can no longer be used. Instead, PDF figures should be used. All EPS figures in the book repository have been converted to PDF using `epstopdf`, which preserves vector graphics. Make sure all images in your chapter are supplied as PDF files and, where possible, in a scalable vector graphics format (no bitmaps). It follows that `\psfrag{}` can no longer be used so all images that rely on `\psfrag{}` must be replaced by appropriate PDF images.
- Supply original image files (SVG) where possible to enable editing of images if this becomes necessary.
- Use Inkscape to draw figures. You can use one of the SVG files from chapter [kirby6] as a template for line widths and colors.
- Where possible, use `width=\smallfig` or `width=\largefig` to specify image sizes.
- Place image files in subdirectories named `pdf`, `svg` etc. inside the chapter subdirectory.
- Use `$...$` for inline math, not `\(...\)`. Use of `\(...\)` in captions breaks the new style files.
- Don't put `\label{...}` inside `\caption{...}`. This breaks the new style files.
- Titles of chapters, sections etc. should *not* be capitalized (with the exception of names and the first letter).
- Only number referenced equations. Use `\begin/end{displaymath}` or `\begin/end{equation*}` until you find out that you actually need to reference an equation.

- Use *subcomponent*, *subelement* instead of *sub component*, *sub element* etc., cf. <http://www.thefreedictionary.com/subcomponent>.
- Use `\index{}` to include important terms in the book index.
- Consider the list of variable names given below and try to follow it where possible.

## **Names of variables**

## **Useful macros**