Manuscript submission and page length estimation for SPIE *OE Letters* and *Optical Engineering* journals

Patrick Egan
University of Limerick
Castletroy
County Limerick
Ireland
E-mail: patrick.egan@ul.ie

A. N. Other, MEMBER SPIE
Research Group
Affiliation
Address

Abstract. With this template, and associated style and LaTeX packages, it is possible to estimate the page length of manuscripts for submission to the SPIE journals *Optical Engineering* and *OE Letters*. With a strict three-page limit, this is particularly important for the latter. This template gives simple instructions on how to prepare the manuscript. © *2006 Society of Photo-Optical Instrumentation Engineers.*
DOI: 10.0000/XXXX

Subject terms: LaTeX, *OE Letters*, page length estimate, manuscript submission.

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1 Prerequisites

The `opteng` style requires the following packages to be installed on the system:

- `overcite` for SPIE style citations
- `geometry` defines the page layout
- `amsmath` is useful for displaying maths
- `fancybox` is used to place the OE LETTERS header
- `pstricks` is used to create the OE LETTERS header
- `graphicx` is used for inserting eps figures

Note SPIE journals are set in times font, thus the package `times` should be loaded in the preamble of the tex file.

2 Introduction

The preamble of the document is where differentiation between either the *Optical Engineering* (`optengjnl`) or the *OE Letters* (`optenglett`) format occurs. Furthermore there is possibility to choose a format suitable for submission (`optengsubmit`: 12pt, doubleline space, single column).

1. Choose either `optengjnl`, `optenglett`, or `optengsubmit` option in the `\documentclass` definition.
2. Choose either instruction. One will print the gray background OE LETTERS heading. Both print rough footers. For manuscript submission **no** command should be active.
3. For *OE Letters* everything is set. Only for *Optical Engineering* should the `\twocolumn` and `minipage` commands be activated.

The *OE Letters* format does not use sections or subsections. Thus, the document should be started directly after the abstract and subject terms, and no `\section` or `\subsection` environments should appear in the tex file.

3 Environments

3.1 *Abstract*

SPIE journal abstracts are set in serif font, so put mathematics in `\mathsf`. The copyright is automatically generated, but the user can specify the digital object identifier `\doi`, subject terms `\subjterm`, and the submission/acceptance date `\loginfo`.

3.2 *Displayed equations*

Equations should fit into one column:

$$d_2 - d_1 = \pm n\pi, \tag{1}$$

or

$$\begin{aligned} E(z,t) = E &= \Re\left[A\exp\left(-j2\pi\nu t\right)\right] \\ &= \frac{1}{2}\left[A\exp\left(-j2\pi\nu t\right) + A^{\star}\exp\left(j2\pi\nu t\right)\right], \end{aligned} \tag{2}$$

or even

$$\begin{aligned} \dot{E}_{x,y} = &\frac{1}{2}\left(1+j\alpha\right)\left(G_{x,y}-\gamma\right)E_{x,y} \\ &+ \kappa E_{x,y}\left(t-\tau\right)\exp\left(-j\Omega_{x,y}\tau\right) \\ &+ \left(\beta_{sp}N\right)^{1/2}\xi_{x,y}. \end{aligned} \tag{3}$$

Use standard LaTeX or AMSTeX environments. For equations that *must* span two columns, it is possible to use a float environment, for example, `\begin{figure*}...\end{figure*}`. Such an environment will not interfere with figure or table numbering (which is controlled by the caption), but it *will* cause equations to float, often with unwanted consequences.

Tab. 1 Sample Table

TEST	TEST	TEST	TEST	TEST
TEST	TEST	TEST	TEST	TEST
TEST	TEST	TEST	TEST	TEST
TEST	TEST	TEST	TEST	TEST

3.3 *Figures and tables*

Figures should be set to one-column size (≈ 8.3 cm) whenever possible. This can be accomplished by setting the graphic width equal to `\linewidth`, for example, Figures 1 and

Tab. 2 Sample Table

TEST	TEST	TEST	TEST	TEST	TEST	TEST	TEST	TEST
TEST	TEST	TEST	TEST	TEST	TEST	TEST	TEST	TEST
TEST	TEST	TEST	TEST	TEST	TEST	TEST	TEST	TEST
TEST	TEST	TEST	TEST	TEST	TEST	TEST	TEST	TEST

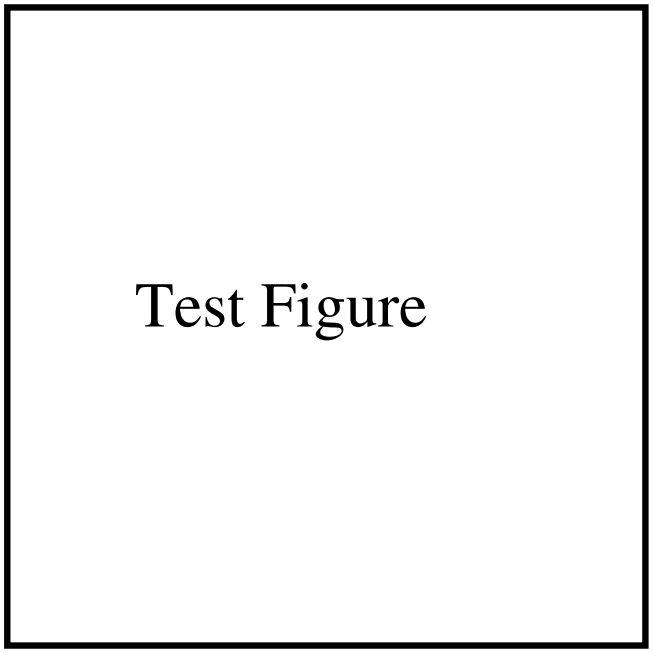


Fig. 1 (Color online) Sample figure. Note `mathsf` should be used to keep mathematics (1, 2, 3) in serif font style.

??. **Tables** should also be set to one column whenever possible, as shown in Table 3.2. However, tables with more than five columns will probably need to be set to two columns, like Table 3.2. For two-column layout, figures and tables can be set across both columns with the alternate figure and table environment commands `\begin{figure*}...\end{figure*}` instead of `\begin{figure}...\end{figure}`. Note that tables are typeset and cannot be reduced in size like art, which may require more space than in the submitted paper.

3.4 *endfloat package*

The `endfloat` package allows easy submission format. By activating the package in the preamble, all figures and tables will be put to the back of the document, and a list of figures will be automatically generated.

4 References and acknowledgments

Reference callouts are formatted with the `overcite` package, which produces superscript numerical reference callouts, for example.[1] Online callouts, for example, see Ref. **?**, can be produced with the command `\citeonline{}`.

Before submitting, authors who use BibTeX should first run BibTeX, then paste the contents of the output bbl file into the tex manuscript file. Perhaps the `spiebib.bst` BibTeX style file is the most suitable for an SPIE submission—in any case *OE Letters* references are significantly shortened by SPIE editors.

Both **Reference** and **Acknowledgments** are handled with the `\acksect` environment. This gives the normal size non-numbered italic font, which SPIE journal use for these two final sections.

4.1 *Biography*

The *Optical Engineering* journal encourages short author biographies. The can be facilitated as follows[1]

```
\begin{biography}[photograph.ps]{Patrick Egan}
received his BEng degree in electronic and computer engineering at
the University of Limerick, Ireland in 2003. He is currently
involved in doctoral research studies in a collaboration between the
University of Limerick and the European Commission Joint Research
Centre, Italy. In April 2006 he was awarded a postdoctoral research
associateship at the National Institute of Standards and Technology,
Gaithersburg, where he hope to commence research following
completion of his PhD. His research interests include optical
metrology, optoelectronics and signal processing.
\end{biography}
```

5 Remaining tasks

5.1 *Figure captions and equations*

The figure and table captions should be flushed left. The equations should also be flushed left and in serif font.

5.2 *OE Letters header font*

The OE LETTERS in the gray background header is not in the correct font.

5.3 *Optical Engineering minipage*

The two `minipage` environments of the *Optical Engineering* option requires alignment. Currently the authors are vertical center on the left column, while the abstract is vertical top on the right. Both should be top vertical.

5.4 *Cover page: Author information*

The SPIE guidelines require a cover page with author information (name, affiliation, email, phone number, fax number). The best solution would be to automatically generate a table from the data supplied to the `\author` and other input.

6 Dummy section

Dummy text. Dummy text.

[1] from `ieee.cls` by Gregory Plett and István Kollár

6.1 *Dummy subsection*

Dummy text. Dummy text.

6.1.1 Dummy subsubsection

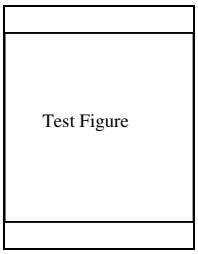
Dummy text. Dummy text.

Acknowledgments

The authors would like to acknowledge…

References

1. P. Egan, F. Lakestani, M. P. Whelan, and M. J. Connelly, "Full-field optical coherence tomography with a complimentary metal-oxide semiconductor digital signal processor camera," *Optical Engineering*, vol. 45, no. 1, p. 015601, Jan. 2006, available: spiedl.aip.org.



Patrick Egan received his BEng degree in electronic and computer engineering at the University of Limerick, Ireland in 2003. He is currently involved in doctoral research studies in a collaboration between the University of Limerick and the European Commission Joint Research Centre, Italy. In April 2006 he was awarded a postdoctoral research associateship at the National Institute of Standards and Technology, Gaithersburg, MD USA, where he hope to commence research following completion of his PhD. His research interests include optical metrology, optoelectronics and signal processing.