LATEX template for preparing an article for submission to OSA journals *Applied Optics*, *Optics Letters*, *JOSA-A* and *JOSA-B*

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This template can be used to prepare a research article for submission to OSA's journals *Applied Optics*, *JOSA A*, *JOSA B*, and *Optics Letters*. For *Optics Letters*, you will need to select `\setboolean{shortarticle}{true}`**. Note that this template can be run from your own TEX system or within the cloud-based Overleaf system (formerly writeLaTeX).** © 2015 Optical Society of America

OCIS codes: *(140.3490) Lasers, distributed feedback; (060.2420) Fibers, polarization-maintaining;(060.3735) Fiber Bragg gratings.*

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1. INTRODUCTION

This template is designed to assist with creating a two-column research article or letter to submit to *Applied Optics*, *JOSA A*, *JOSA B*, and *Optics Letters*. See the OSA's Style Guide and Manuscript Templates pages for more details.

If you have a question while using this template on writeLATEX, please use the help menu ("?") on the top bar to search for help or ask us a question using the option in the lower right of the editor.

2. EXAMPLES OF ARTICLE COMPONENTS

The sections below show examples of different article components.

3. FIGURES AND TABLES

It is not necessary to place figures and tables at the back of the manuscript. Figures and tables should be sized as they are to appear in the final article. Do not include a separate list of figure captions and table titles.

Figures and Tables should be labelled and referenced in the standard way using the `\label{}` and `\ref{}` commands.

A. Sample Figure

Figure 1 shows an example figure.
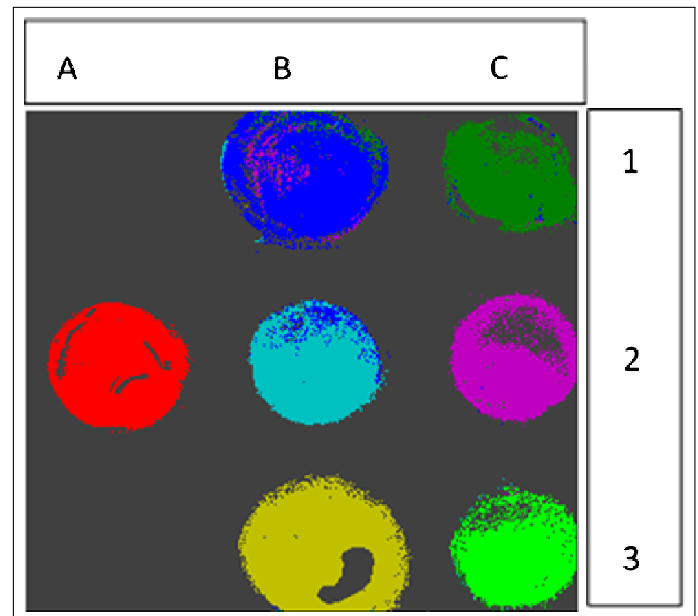
B. Sample Table

Table 1 shows an example table.

Fig. 1. False-color image, where each pixel is assigned to one of seven reference spectra.

Table 1. Shape Functions for Quadratic Line Elements

local node	$\{N\}_m$	$\{\Phi_i\}_m \ (i = x, y, z)$
$m = 1$	$L_1(2L_1 - 1)$	Φ_{i1}
$m = 2$	$L_2(2L_2 - 1)$	Φ_{i2}
$m = 3$	$L_3 = 4L_1 L_2$	Φ_{i3}

4. SAMPLE EQUATION

Let $X_1, X_2, \ldots, X_n$ be a sequence of independent and identically distributed random variables with $E[X_i] = \mu$ and $\text{Var}[X_i] = \sigma^2 < \infty$, and let

$$S_n = \frac{X_1 + X_2 + \cdots + X_n}{n} = \frac{1}{n}\sum_i^n X_i \tag{1}$$

denote their mean. Then as n approaches infinity, the random variables $\sqrt{n}(S_n - \mu)$ converge in distribution to a normal $\mathcal{N}(0, \sigma^2)$.

5. SAMPLE ALGORITHM

Algorithms can be included using the commands as shown in algorithm 1.

Algorithm 1. Euclid's algorithm

```
1: procedure EUCLID(a, b)              ▷ The g.c.d. of a and b
2:     r ← a mod b
3:     while r ≠ 0 do                  ▷ We have the answer if r is 0
4:         a ← b
5:         b ← r
6:         r ← a mod b
7:     return b                        ▷ The gcd is b
```

Add citations manually or use BibTeX. See [1].

REFERENCES

1. Y. Zhang, S. Qiao, L. Sun, Q. W. Shi, W. Huang, L. Li, and Z. Yang, "Photoinduced active terahertz metamaterials with nanostructured vanadium dioxide film deposited by sol-gel method," Opt. Express **22**, 11070–11078 (2014).