

# L<sup>A</sup>T<sub>E</sub>X template for preparing an article for submission to *Optica*

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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 *Optica*. See the OSA's [Style Guide](#) and [Manuscript Templates](#) pages for more details.

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## 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.

**Table 1. Shape Functions for Quadratic Line Elements**

local node	$\{N\}_m$	$\{\Phi_i\}_m$ ( $i = x, y, z$ )
$m = 1$	$L_1(2L_1 - 1)$	$\Phi_{i1}$
$m = 2$	$L_2(2L_2 - 1)$	$\Phi_{i2}$
$m = 3$	$L_3 = 4L_1L_2$	$\Phi_{i3}$

## 4. SAMPLE EQUATION

Let  $X_1, X_2, \dots, X_n$  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

$$S_n = \frac{X_1 + X_2 + \dots + X_n}{n} = \frac{1}{n} \sum_i^n X_i \quad (1)$$

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

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```

1: procedure EUCLID( $a, b$ )                                ▷ The g.c.d. of  $a$  and  $b$ 
2:    $r \leftarrow a \bmod b$ 
3:   while  $r \neq 0$  do                                    ▷ We have the answer if  $r$  is 0
4:      $a \leftarrow b$ 
5:      $b \leftarrow r$ 
6:      $r \leftarrow a \bmod b$ 
7:   return  $b$                                            ▷ The gcd is  $b$ 

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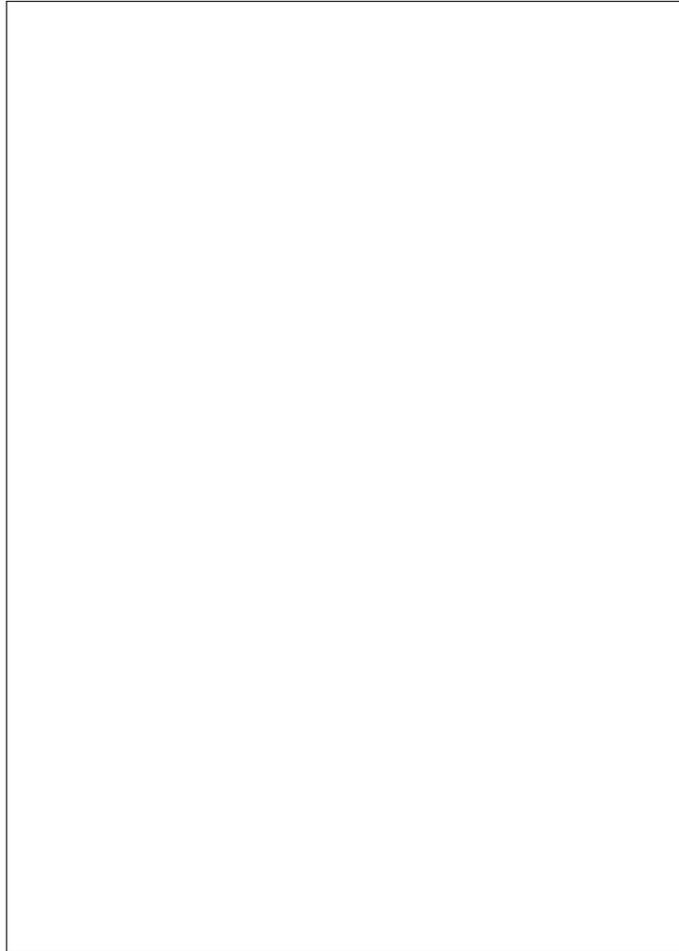
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## SUPPLEMENTAL DOCUMENTS

*Optica* authors may include supplemental documents with the primary manuscript. For details, see [Supplementary Materials in Optica](#). To reference the supplementary document, the statement "See Supplement 1 for supporting content." should appear at the bottom of the manuscript (above the references). 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).



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