

ILLINOIS DATA SCIENCE INITIATIVE

LATEX YEAH FOR AN IDSI TECHNICAL REPORT

Version: 0.0.1

Author(s): Bhuvan Venkatesh, Professor Brunner

April 9, 2017

LaTeX yeah For an iDSI Technical Report

BHUVAN VENKATESH^{1,2} AND PROFESSOR BRUNNER^{2,3}

¹National Center For Supercomputing Applications (NCSA)

²Laboratory for Computation, Data, and Machine Learning

³Univeristy of Illinois

Compiled April 9, 2017

Here is my very important research that I worked very hard on and because I am brilliant the work will you will read below will change your life in unimaginable ways. Well at least until you die, then it will change the lives of your posterity until the end of your family line.

<https://github.com/lcdm-uiuc>

INTRODUCTION

This template is designed to assist with creating a two-column research article or letter to submit to *iDSI*.

If you have a question while using this template on write_{LaTeX}, 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.

EXAMPLES OF ARTICLE COMPONENTS

The sections below show examples of different article components.

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.

Sample Figure

Figure ?? shows an example figure.

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

Sample Table

Table ?? shows an example table.

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

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

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}
$m = 3$	$L_3 = 4L_1L_2$	Φ_{i3}

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

SAMPLE ALGORITHM

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

Algorithm 1. Euclid's algorithm

```

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  $b$ 
```

FUNDING INFORMATION

National Science Foundation (NSF) (1263236, 0968895, 1102301); The 863 Program (2013AA014402).

ACKNOWLEDGMENTS

Formal funding declarations should not be included in the acknowledgments but in a Funding Information section as shown above. The acknowledgments may contain information that is not related to funding:

The authors thank H. Haase, C. Wiede, and J. Gabler for technical support.

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).

REFERENCES

For references, you may add citations manually or use BibTeX. E.g.,

Note that letter submissions to *Optica* use an abbreviated reference style. Citations to journal articles should omit the article title and final page number; this abbreviated reference style is produced automatically when the `\setboolean{shortarticle}{true}` option is selected in the template, if you are using a .bib file for your references.

However, full references (to aid the editor and reviewers) must be included as well on an informational page that will not count against page length; again this will be produced automatically if you are using a .bib file and have the `\setboolean{shortarticle}{true}` option selected.