

## Sample L<sup>A</sup>T<sub>E</sub>X Style Guide for Journal of Contemporary Applied Mathematics

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**Abstract.** This document provides details regarding formatting L<sup>A</sup>T<sub>E</sub>X articles for Journal of Contemporary Applied Mathematics. The JCAM style is created from modifications of the standard latex "article" style. While we at JCAM encourage and prefer submitted articles to be compiled from latex, we have attempted to give enough information so authors could nearly correctly format articles written in Microsoft Word. Only documents sourced in L<sup>A</sup>T<sub>E</sub>X or Microsoft Word will be accepted. Please contact production editor A. Tagiyeva with any questions about this document, or formatting articles for JCAM.

**Key Words and Phrases:** Keyword 1, Keyword 2, Keyword 3, Keyword 4, ...

**2010 Mathematics Subject Classifications:** AMS classification codes

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### 1. Front Matter

The title page should include a title (verb ) in 18-pt font using initial caps, followed by the authors full names in verb . The title should begin 6.5cm from the top of the page. For the running headers, short names, indicated by the first letter of the first name then the surname, should be indicated also. Use verb \* to indicate the corresponding author. This is required, as is at least an email address for the corresponding author. If the authors' affiliations are different, use verb in the author line. Affiliations and addresses should be specified with verb , using verb . A new line should be begun for each affiliation (verb ). Use verb (no s for single author), with each email address in a true type font, followed by the short name, and separated with commas.

An abstract of no more than 200 words, using the **abstract** environment is required, as are at least 3 keywords in verb . AMS classification numbers should

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\*Corresponding author.

be specified using verb `. The abstract, keywords, and AMS classifications should be set apart with horizontal rules 15cm long.`

The email addresses are listed at 4cm from the bottom, and the corresponding author is footnote is at 5cm from the bottom, under a 2cm horizontal rule. 2.5cm from the top should be the journal name in all caps and bold font, with "PRE-PUBLICATION SUBMISSION DOCUMENT" on the next line. The following line should be blank, with "ISSN 2222-5498, E-ISSN 3006-3183 - <http://journalcam.com/>" on the next line. The footer is 2.5cm from the bottom of the page, with <http://journalcam.com/> left-justified, "© *thisyear* JCAM All rights reserved" right-justified, and the page number centered with the text.

## 2. Primary Document

### 2.1. General

The article should be formatted for A4-sized paper, using a basic 11-point Roman font, with lines single-spaced. The left margin is approximately 2.5cm, and the right margin is 4cm. The top margin is 3.5cm, with a header at 2.7cm; the bottom margin is 4.5cm. Except for the title page, each page header should list the running author followed by " / AZ. J. Math, *beginpage-endpage*", with the current page number right justified.

Sections should be numbered using Arabic numerals, and the headings should be typed with initial letters for important words capitalized. In this sample, we use the **bold** typefont to indicate latex environments that should be opened with verb `begin` and closed with verb `end`. Appendices should be at the end of the paper (after the bibliography) in an unnumbered section (use verb `section*` ). Any acknowledgements should be placed after the conclusion but before the bibliography. They should be entered as a new paragraph starting with "ACKNOWLEDGEMENTS" in a bold typeface; for example, use verb `paragraphACKNOWLEDGEMENTS` .

For lists, use either the **enumerate** environment:

1. these
2. are
3. enumerated

or the **itemize** environment:

- these
- are
- itemized

If you wish to number / mark items differently, use `verb item[(i)]` (or whatever). Also, if you instead want lists with less white space, use the `paralist` package (verb `usepackageparalist`) and replace the environments with **`compactenum`** or **`compactitem`**

## 2.2. Equations

Inline math should be used sparingly, with equations longer than half a line being used as display equations. Doing otherwise may force the editorial staff to break the equations to fit in the margins. Display equations should be numbered on the far right, using arabic numbers that increment throughout the entire paper - not by section. For regular single-line display equations, use the **`equation`** or **`equation*`** (no number) environments:

$$\underbrace{Y_{vec}}_{np \times 1} = \underbrace{X_{sup}}_{np \times p} \underbrace{\beta}_{p(p+1) \times 1} + \underbrace{\varepsilon}_{np \times 1}. \quad (1)$$

For multi-line equations that you want lined up, use the **`eqnarray`** or **`eqnarray*`** environments:

$$\begin{aligned} C_1(\hat{\mathcal{F}}^{-1}) &= \left\{ \frac{m}{2} \log \left( \frac{\text{tr}[(X'_{sup} \hat{\Omega}^{-1} X_{sup})^{-1}] + \frac{1}{2n} G}{m} \right) \dots \right. \\ &\quad \left. - \frac{1}{2} \log |X'_{sup} \hat{\Omega}^{-1} X_{sup}|^{-1} - \frac{p}{2} \log(2) + \frac{p(p+1) \log n}{4} \dots \right. \\ &\quad \left. - \frac{(p+1)}{2} \log |\hat{\Sigma}_{FGLS}^*| \right\}. \quad (2) \end{aligned}$$

For multi-line equations that you want centered together, use the **`gather`** or **`gather*`** environments:

$$AIC = np \log(2\pi) + n \log |\hat{\Sigma}| + np + 2m, \text{ where} \quad (3)$$

$$m = \left( p(k+1) + \frac{p(p+1)}{2} \right). \quad (4)$$

For all equations that will be referenced in text, it is preferred that `verb` be used in the equation, and `verb 2.3` be used in the text.

### 2.3. Theorem Environments

Theorems, definitions, lemmas, corollaries, remarks, and examples should all be placed in the specified environments. Like sections and equations, numbering for each should proceed through the entire document using Arabic numerals. Use of `verb` and `verb 2.3` for referencing is preferred (also for floats). Here we have examples:

**Definition 1.** *This is a **definition**.*

**Lemma 1.** *This is a **lemma**.*

**Theorem 1.** *This is a **theorem**.*

**Corollary 1.** *This is a **corollary**.*

**Remark 1.** *This is a **remark**.*

**Example 1.** *This is an **example**.*

Theorems which you want to prove should be accompanied with an instance of the **proof** environment:

*Proof.* This is a **proof**



### 2.4. Floats - Tables and Figures

Floating objects - tables and figures should be centered horizontally and placed near but after their first reference in the text. An exception is if a float is placed on the top of the same page. Figures and tables should also be numbered sequentially through the document using Arabic numerals. Figures should have a short caption underneath, and tables should have a short caption above. Examples are in Table 1 and Figure ??.

Figure 1: label A Caption with Initial Caps.

## 3. References

The bibliography should be titled "References", with the section heading centered horizontally. It is preferred that bibliographic references be compiled with `bibtex`, using the "natbib" package with the "plain" style. Inline citations should be numeric references of the form [#]; they can be done with `verb []`, `verb []`,

Table 1: A Caption with Initial Caps.

Step	$X_1$		$X_2$	
	$MSE_{SUB,i}$	$MSE_{SAT,i}$	$MSE_{SUB,i}$	$MSE_{SAT,i}$
10	0.0652*	0.0675	0.0325*	0.0337
20	0.0687*	0.0701	0.0321*	0.0330
50	0.0674*	0.0696	0.0334*	0.0346
70	0.0711*	0.0729	0.0339*	0.0349
80	0.0645*	0.0669	0.0315*	0.0327
90	0.0652*	0.0670	0.0319*	0.0329
100	0.0684*	0.0699	0.0333*	0.0340

etc. . . . Regarding formatting the bibliographic entries, the primary requirement is that they be in alphabetic order by the first author's surname. In the following sample bibliography, we have:

- [1, 2] are journal articles
- this is a book: [3]

### References

- [1] R.Engle and C.Granger, Cointegraion and error-correction: Representation, estimation and testing. *Econometrica*, v.55, No.251, 1987, pp. 20-32.
- [2] J.West and Linster, The Evolution of Fuzzy Rules in Two-Player Games. *Southern Economic Journal*, v.69, No.3, 2003, pp.705-717.
- [3] J.Holland, *Adaptation in Natural and Artificial Systems*. University of Michigan Press, Ann Arbor, Michigan, 1975

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