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Example of using *JZUS-A* LaTeX template second line if necessary*#

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Abstract: This brief sample shows how to use the *Journal of Zhejiang University-SCIENCE A (Applied Physics & Engineering)* (*JZUS-A* for short) LaTeX template, by listing the system requirement & installation of compilation environments and including comments in the tex file to contain all possible instances that may occur in articles considered to be published in *JZUS-A*, which started in 2005, monthly, co-published by Zhejiang University Press and Springer. We also introduce the aim & scope, database information, and online submission of *JZUS-A*, and show the different paper formats at the two stages of "manuscript preparation" and "revision & acceptance". The logos and homepage of the three sibling journals *JZUS(A/B/C)* are also included.

Key words: Manual; *Journal of Zhejiang University-SCIENCE A (Applied Physics & Engineering)*; LaTeX template

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1 System requirement & installation

This is a brief example of using the *JZUS-A* LaTeX template to format the article published in *Journal of Zhejiang University-SCIENCE A (Applied Physics & Engineering)* (*JZUS-A* for short). This is the preliminary version of jzusa.sty as well as jzus-a.bst as a template. Welcome reports on bugs and suggestions for improvement.

This template has been tested under the Windows 2000/XP/Vista/Windows 7 operating system with the newest version MiKTex; it can also work with any previous version of MiKTex, even with MacTeX, teTeX and other LaTeX implementations. The most convenient way is to put the files under the same directory as your LaTeX source file. For saving processing time, we suggest authors use the default setting. It is highly recommended to download the newest version CTeX from http://www.ctex.org

2 Introduction of *JZUS-A*

Aim & scope: *Journal of Zhejiang University-SCIENCE A (Applied Physics & Engineering)* is an international peer-reviewed journal. It covers research in Applied Physics, Mechanical and Civil Engineering, Environmental Science and Energy, as well as Materials Science and Chemical Engineering.

Database information: *JZUS-A* has been accepted by Science Citation Index-Expanded (SCI-E), Ei Compendex, INSPEC, CA, SA, JST, CSA, etc.

Online submission: www.editorialmanager.com/zusa/

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3 Paper format

3.1 Preparing manuscript

The electronic manuscript should be prepared to accord with the following (see also http://www.zju.edu.cn/jzus/manuscript.htm):

Title and by-line: Name, affiliation (institution) of the author(s), city, zip code, country, and e-mail address of the author(s) should be given.

Abstract: About 150–250 words should outline the objective, method, main results, and conclusions without mathematical equations or citations.

Key words: Provide 3–6 key words or phrases for cross-indexing this article.

Text: The text should contain an Introduction that puts the paper into proper perspective for the reader, and should also contain Methods, Results, Discussion, and Conclusions sections.

Acknowledgements: Individuals or units other than authors who were of direct help in the work should be acknowledged by a brief statement following the text.

References: Only essential references (journal article, book, thesis, report, proceedings, etc.) cited in the text (in Author-Year format) can be listed in alphabetical order by author's surname.

3.2 Revision & acceptance

3.2.1 Figures

Format: At the revision stage, authors who have created their files using a drawing or painting program such as Visio, Origin, Excel, AutoCAD, Coreldraw should provide the original files that can be edited. Authors who have created their files using a drawing or painting program should export the files to TIFF, EPS, PSD, RAW, etc. format. Matlab figures are expected to be exported to EMF or EPS format. The figure's magnification should be expressed by scale bars.

Resolution: Adequate figure resolution is essential to a high-quality print and online rendering of your paper. Raster line art should carry an absolute minimum resolution of 600 dots per inch (dpi).

Line width: The line width should generally be no less than 0.25 pt; the common line widths are 0.5/0.75 pt. Please note that the actual line width changes with the scale of the figure. In different software, we recommend the following line widths: Visio: – 03; Origin: – 1.5; Matlab: – 1.5 pt, etc.

Figures must be numbered consecutively with Arabic numerals, and each figure must be placed in the text following the paragraph in which it is first mentioned. A caption giving the figure number and a brief description must be included. The caption should be understandable without reference to the text. Figures should be cited in the text using the following format: Fig. 1, Fig. 1a, Figs. 1 and 2, Figs. 1–3, or Figs. 1a–1c.

There will be an extra charge for those graphics considered for publication in color. Authors are expected to use different line types to distinguish the different parts of a figure that they do not want to have published in color.

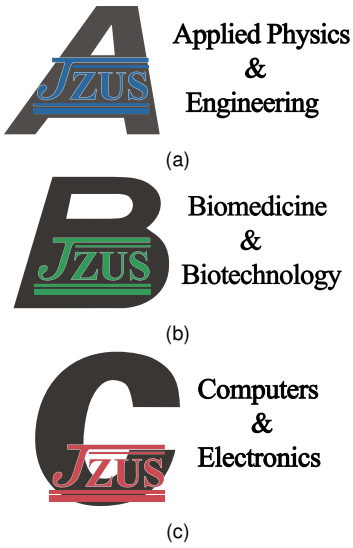

Fig. 1 Logos of (a) *Journal of Zhejiang University-SCIENCE A (Applied Physics & Engineering)*, (b) *Journal of Zhejiang University-SCIENCE B (Biomedicine & Biotechnology)*, and (c) *Journal of Zhejiang University-SCIENCE C (Computers & Electronics)*

3.2.2 Tables

Tables should usually contain three horizontal lines. Do not use vertical lines. Each table must have a brief title that describes its contents. The title should be understandable without reference to the text. Details such as explanatory material, specific entries, and definitions of non-standard abbreviations should be put in table footnotes, not in the title. In setting up tables, authors should keep in

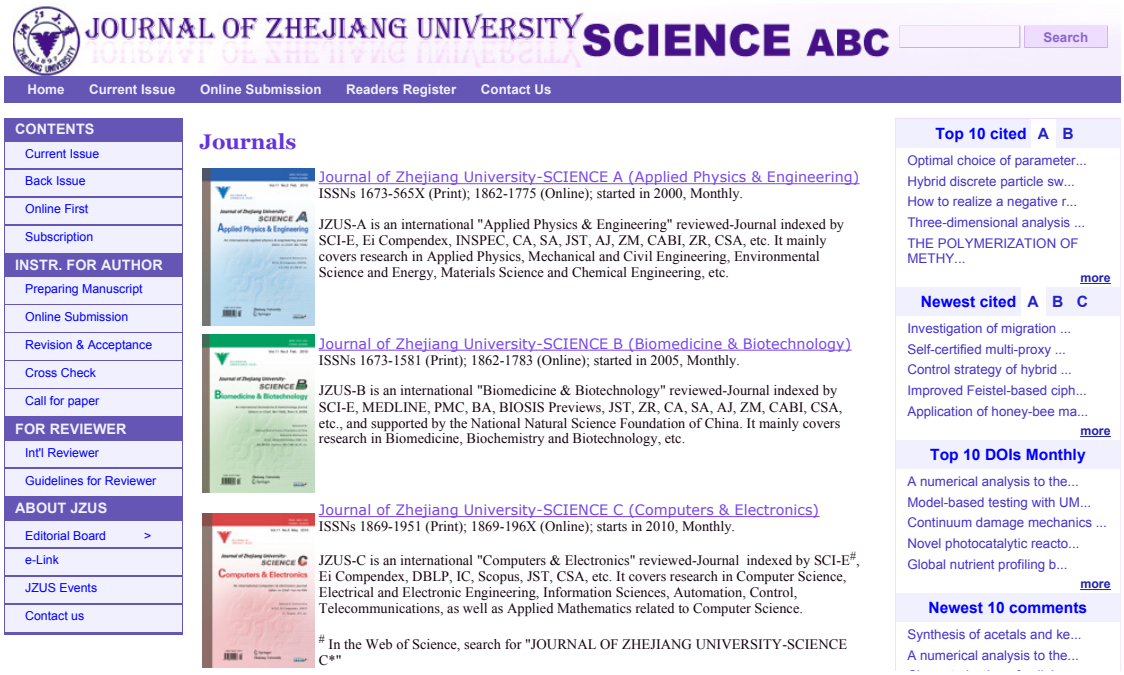

Fig. 2 ***JZUS(A/B/C)*** **website, http://www.zju.edu.cn/jzus. When an article is commented by a reader, or cited by an ISI journal or proceeding, an e-mail notification will be sent automatically to the author(s). For each article, statistics such as downloads, clicks, citations, and comments are given in the contents of each issue**

Table 1 Results for face and eye detection processing using a Pentium IV 2.2 GHz CPU* (Deniz et al., 2010)

Detector	TD (%)			FD (%)			Processing time
	Faces	Left eye	Right eye	Faces	Left eye	Right eye	(ms)
Rowley	89.27	77.51	78.18	2.16	0.80	1.00	422.4
Viola-Jones	97.69	0.00	0.00	8.25			117.5
ENCARA2	99.92	91.83	92.48	8.07	4.04	3.33	45.6

* Taken from Castrillón et al. (2007). TD: correct detection ratio; FD: false detection ratio

mind the area of the Journal's page (16.4 cm × 22.8 cm) and the column width (8.0 cm) and should make tables conform to the limitations of these dimensions.

All tables must be mentioned in the text in consecutive order and must be numbered with Arabic numbers. Tables should be cited in the text using the following format: Table 1, Tables 1 and 2, or Tables 1–3.

3.2.3 Variables and formulate

Variables, regardless of the context (formula, figure, or table), should be in Italics (e.g., x_1); if a variable represents a vector or a matrix, it should be in Italics & Bold (e.g., $\boldsymbol{x}_1$). Numerals and operators should never be italicized unless they are components of a variable. The following are some typical equations (Theodoridis et al., 2011):

Table 2 Video sequences used in the experiments, ordered by increasing head motion* (Deniz et al., 2010)

Video sequence	Number of frames	Average distance	Variance position
1	126	42.7 (1.6)	8.2
2	175	42.9 (2.2)	11.1
3	176	44.1 (1.8)	11.3
4	148	40.0 (2.8)	27.1
5	119	42.9 (2.8)	37.7
6	129	42.9 (4.4)	120.8
7	208	41.6 (3.1)	164.4

* Taken from images captured by camera 1

$$\frac{\mathrm{d}}{\mathrm{d}t}|\bar{\boldsymbol{x}}_{f_i}\cdot\boldsymbol{W}_{f_i}^{l}|^2=(\boldsymbol{W}_{f_i}^{l})^{\mathrm{T}}\dot{\boldsymbol{W}}_{f_i}^{l}\bar{\boldsymbol{x}}_{f_i}(\bar{\boldsymbol{x}}_{f_i})^{\mathrm{T}}, \quad (1)$$

$$I_{j_1,j_2,\ldots,j_n}^{l_1,l_2,\ldots,l_n}(\boldsymbol{x}(t))=\begin{cases}\alpha(\boldsymbol{x}(t)), & \text{if } \boldsymbol{x}(t)\in\Omega_{j_1,j_2,\ldots,j_n}^{l_1,l_2,\ldots,l_n},\\ 0, & \text{otherwise,}\end{cases} \tag{2}$$

$$\begin{aligned}\dot{V}&\leq-\lambda_{\min}(K)\|\boldsymbol{\xi}\|^2-\lambda_{\min}(K)\|\boldsymbol{\zeta}\|^2\\&\quad+\theta_{\mathrm{ud}}\|\boldsymbol{\xi}\|+4\rho\|\boldsymbol{\xi}\|^2\\&\leq-\left[(\lambda_{\min}(K)-4\rho)\|\boldsymbol{\xi}\|-\theta_{\mathrm{ud}}\right]\|\boldsymbol{\xi}\|\\&\quad-\lambda_{\min}(K)\,\|\boldsymbol{\zeta}\|^2\\&\leq 0.\end{aligned} \tag{3}$$

3.2.4 Theorem, algorithm, and other environments

Definition 1 (Definition title here) This is an illustration of a definition.

Example 1 This is an illustration of an example.

Lemma 1 (Lemma title here) This is a lemma.

Experiment 1 This is an experiment.

Theorem 1 (Theorem title here) This is a theorem.

Theorem 2 (Theorem 2 title here) This is an illustration of Theorem 2.

The following is a sample algorithm: Algorithm 1 (Xu and Zhu, 2011).

Algorithm 1 Iterative algorithm for Bayes risk decoding

$R' \leftarrow$ MAP-Decode($\mathcal{T}$) // One-best to initialize
$R' \leftarrow$ AddEps(R') // Add ϵ word to normalize R'
loop
  do forward algorithm, yielding estimate $\hat{E}_1$
  for $k \leftarrow 1$ to $|R'|$ **do**
    do backward algorithm, obtaining $\gamma(k, w(a))$
    update to R: $r_k \leftarrow \max_{w(a)}\gamma_{R'}(k, w(a))$
  end for
  do line 4 with R, obtaining $\hat{E}_2$
  if $\hat{E}_2 - \hat{E}_1 = 0$ **then**
    break
  end if
  $R' \leftarrow R$
  $\hat{E}_1 \leftarrow \hat{E}_2$
  $R' \leftarrow$ AddEps(R')
end loop
$R' \leftarrow$ RemoveEps(R') // Remove ϵ word to output

3.2.5 References & text citation

The reference list provides complete information of the author-date citation in English and lists in alphabetical order of authors' surnames. References with more than 10 authors must list the first 10 authors, followed by et al. The references mentioned in the text should accord with the reference list. For a reference published other than in English, the language used should be noted at the end of the reference list, e.g., "(in Chinese)". The publisher and place of publication should be given for a book or proceedings. The DOI (refer to http://www.doi.org) should be provided if it is available.

Here are the rules: the command '\citep{}' provides a pair around the reference, while '\cite{}' cannot. The following are some constantly used citations in our template. When you cannot determine the reference type, or the reference type is not included in our template, please use the 'misc' type. Any suggestion on the improvement of the jzus-a.bst is welcome.

- For journal articles (Kampf et al., 2002; Tanner et al., 2003; Yu and Wang, 2010)
- For whole books/monographs or chapters in edited books (Prigogine, 1976)
- For a proceeding (Gorini et al., 2006)
- For a master or PhD dissertation (Rizvi, 2006)
- For a report (Sweeney, 2000)
- For a preprint (Wu et al., 2008)
- For a patent (Cookson, 1985)
- For a standard (ISO, 1982)
- For an electronic material (University of Sheffield Library, 2001)
- For an undetermined reference type (RedHat, Microsoft, IBM and Sun, 2010)

For details, see "Reference list examples" at http://www.zju.edu.cn/jzus/revacc.htm#1

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