GUIDELINES FOR CONTRIBUTORS TO SUBMIT IN "COMMUNICATIONS IN PHYSICS"

NGUYEN DAI HUNG[1,2], NGUYEN BA AN[1], TRAN MINH TIEN[1]
AND NGUYEN XUAN GIAO[2,†]

[1]*Institute of Physics, Vietnam Academy of Science and Technology*
10 Dao Tan, Ba Dinh, Hanoi, Vietnam

[2]*Publishing House for Science and Technology, Vietnam Academy of Science and Technology*
18 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam

[†]*E-mail:* cip@vjs.ac.vn

Abstract. *The abstract is to be in fully justified text, below the author and affiliation information. Use the word "Abstract" as the title, in 12-point Times, boldface type, initially capitalized. The abstract is to be in 11-point single-spaced type. It should summarize the contents of the paper. It should be at least 70 and at most 200 words.*

Keywords: enter key words or phrases in lower case alphabetical order, separated by commas.

Classification numbers: according to *Physics and Astronomy Classification Scheme*, (available at Classification Numbers).

I. INTRODUCTION

Please follow the steps outlined below when submitting your manuscript to the *Communications in Physics*. This style guide now has several important modifications, so all authors should read this new version.

I.1. Language

All manuscripts must be in English.

I.2. Dual submission

By submitting a manuscript to CIP, the authors guarantee that it has not been previously published or accepted for publication in substantially similar form in an archival peer-reviewed

forum. Furthermore, no paper which contains significant overlap with the contributions of this paper is neither under review at the moment of submission nor will be submitted during the CIP review period to **any of the following**: another conference, a workshop, or a journal. The authors also attest that they did not submit substantially similar submissions to CIP. Violation of any of these conditions will lead to rejection. If you are not sure about the extent of overlap, you may upload a copy of the paper in question as supplementary material. Note that a Technical Report (departmental, arXiv.org, etc.) that is put up without any form of direct peer-review is **NOT** considered a publication. Likewise, mention of the work under review in a presentation is **NOT** considered a violation.

If there are any papers that may appear to the reviewers to violate this condition, then it is your responsibility to (1) cite these papers, (2) argue in the body of your paper why your JCC paper is nontrivially different from these concurrent submissions, and (3) include anonymized versions of those papers in the supplemental material.

I.3. Paper length

The minimum paper length is 6 pages. The maximum lengths of a research paper and a survey paper are respectively 15 pages and 20 pages. Overlength and underlength papers will simply not be reviewed. This includes papers where the margins and formatting are deemed to have been significantly altered from those laid down by this style guide.

I.4. Mathematics

Please number all of your sections and displayed equations. It is important for readers to be able to refer to any particular equation. Just because you did not refer to it in the text does not mean some future reader might not need to refer to it. It is cumbersome to have to use circumlocutions like "the second equation from the top of page 3 column 1".

Example of an equation:

$$a^2 = b^2 + c^2 \tag{1}$$

II. FORMATTING YOUR PAPER

All text must be in a one-column format. The main title (on the first page) should begin 1.0 inch (2.54 cm) from the top edge of the page. The second and following pages should begin 1.0 inch (2.54 cm) from the top edge. On all pages, the bottom margin should be 1-1/8 inches (2.86 cm) from the bottom edge of the page for 8.5×11-inch paper; for A4 paper, approximately 1-5/8 inches (4.13 cm) from the bottom edge of the page.

II.1. Margins and Page Numbering

All printed material, including text, illustrations, and charts, must be kept within a print area 6-7/8 inches (17.5 cm) wide by 8-7/8 inches (22.54 cm) high.

II.2. Type-style and Fonts

Wherever Times is specified, Times Roman may also be used. If neither is available on your word processor, please use the font closest in appearance to Times to which you have access.

MAIN TITLE. Center the title 1-3/8 inches (3.49 cm) from the top edge of the first page. The title should be in Calibri 14-point, boldface capitalized type. A subtitle may be optionally included. Leave a blank line after the title.

AUTHOR NAME(s) and AFFILIATION(s) are to be centered beneath the title and printed in Times 11-point, non-boldface type. This information is to be followed by one blank line.

The ABSTRACT and MAIN TEXT are to be in a one-column format.

MAIN TEXT. Type main text in 11-point Times, single-spaced. Do NOT use double-spacing. All paragraphs should be indented 1 pica (approx. 1/6 inch or 0.422 cm). Make sure your text is fully justified—that is, flush left and flush right. Please do not place any additional blank lines between paragraphs.

Figure and table captions should be 10-point Roman type as in figure **??**. Short captions should be centered.

Callouts should be 10-point Helvetica, non-boldface type. Initially capitalize only the first word of section titles and first-, second-, and third-order headings.

FIRST-ORDER HEADINGS. (For example, **I. INTRODUCTION**) should be Times 12-point boldface, capitalized, centered, with one blank line before, and one blank line after.

SECOND-ORDER HEADINGS. (For example, **I.1. Database elements**) should be Times 11-point boldface, initially capitalized, flush left, with one blank line before, and one after. If you require a third-order heading (we discourage it), use 10-point Times, boldface, initially capitalized, flush left, preceded by one blank line, followed by a period and your text on the same line.

II.3. Footnotes

Please use footnotes[1] sparingly. Indeed, try to avoid footnotes altogether and include necessary peripheral observations in the text (within parentheses, if you prefer, as in this sentence). If you wish to use a footnote, place it at the bottom of the column on the page on which it is referenced. Use Times 9-point type, single-spaced.

II.4. Auto-formulas and formulas quoted in the submit paper

The formulas are numbered automatically in the article and should be labeled so that if necessary it also cited in the text of the article. At the end of the formula should have a dot and comma in the correct grammar. Two formulas (2) and (3) are numbered automatically and labeled:

$$H = E_g + \frac{\vec{p_e}^2}{2m_e^*} + V_{\text{conf}}(\vec{r}_e), \tag{2}$$

where m_e^* is the effective mass electron.

Note that the formula (2) end by comma because it not yet ended sentences, but follows formula (3) ended by the dot because of sentence has finished:

$$\alpha^\beta = \frac{\gamma}{\lambda}. \tag{3}$$

Later when we used to quote the syntax \eqref{energy} obtained output: (2) is energy of electrons, also ordered \eqref{alpha} citer the fomula with label \label{alpha} will for output (3).

---

[1]This is what a footnote looks like. It often distracts the reader from the main flow of the argument.

II.5. **Include figure in the text**

The figure captions size is 10 pt. It does not larger or equal size of text (11pt).

Text format: 15 cm × 21 cm. The figures should be exported to *.pdf or *png. Layout figures should size reasonable. If figures have a width from 8 cm to 14 cm, we put its independently between two paragraphs.

In the case the figure width less than or equal to 7.5 cm, then we can leave the drawings with the command structure as follow (see Fig. 1):

Fig. 1. Figure caption, solid line is theory data, ◇ is experimental data

```
 \begin{wrapfigure}{r}{8.5cm}
 \centering
 \includegraphics[width=7.5cm]{fig1.pdf}
 \label{fig1}
 \caption{Figure caption,
 solid line is theory data, $\Diamond$ is experimental data}
\end{wrapfigure}
```
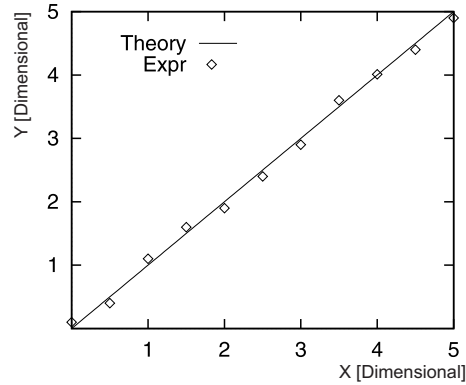
In the case these are two figures width the same sizes and figure width less than or equal to 7.5 cm, then we can leave the drawings with the command structure as follow (see Figures 2, 3):

```
\begin{figure}[h]
\minipage{0.485\textwidth}
\centering
\includegraphics[width=5cm]{fig2.pdf}
\caption{\label{fig2}Caption of figure \ref{fig2}}
\endminipage
\hfill
\quad
\minipage{0.485\textwidth}
\centering
\includegraphics[width=5cm]{fig3.pdf}
\caption{\label{fig3}Caption of figure \ref{fig3}}
\endminipage
\hfill
\end{figure}
```
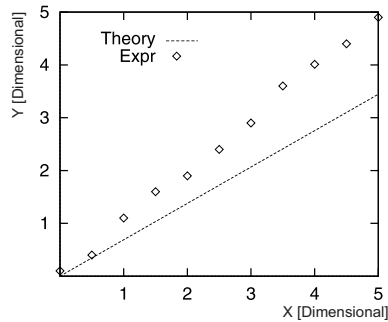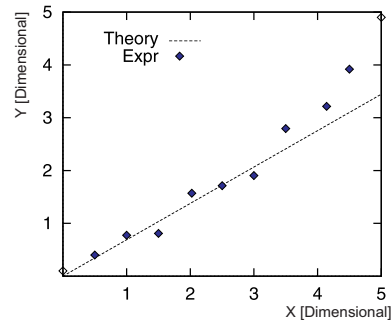
Fig. 2. Caption of figure 2   **Fig. 3.** Caption of figure 3

II.6. Generating bibliographies by using BibTeX [1]

BibTeX uses a basic text formatting independently for a list of references, such as articles, books, and theses. File Bibtex database references often ending .bib. The basic philosophy underlying LaTeX is that of separating "logical formatting" from "visual formatting". Authors should only be concerned with the former and not have to worry about the latter. LaTeX makes this possible by allowing authors to specify document elements with logical constructs such as \author, \title, \section, etc., while the appearance of these items in the typeset document is determined by thedocument class.

Bibtex is a program that applies the same philosophy to bibliographies. In bibtex, bibliography entries are specified by providing values for fields such as author, title, volume, etc., without regard to the formatting of these items. The formatting is determined by a bibliography style, which plays the same role as the document class in LaTeX. To set a bibliography using bibtex requires the following steps, which will be explained in detail below.

1. Create a "bibtex database".
2. Choose a bibliography style and insert an instruction in the tex file of the paper to load the bibtex database and format references according to this style file.
3. Process the paper through multiple runs of latex and bibtex.

Here are the steps in detail:

Step 1. Creating a bibtex database [1]

Like any database, a bibtex database consists of records and fields. Each bibtex record holds the bibliographic information for a single bibliography entry. Records begin with an "at" symbol (@), followed by the record type, and, in braces, a comma-separated list of entries of the form "fieldname = value", where the "fieldnames" are components of the bibliography entry such as "author", "title", etc.

Using Google Scholar to create BibTeX citations

Google indexes most things on the web. "Most things" includes publications which are searchable through Google Scholar. Google Scholar generates BibTeX citations which can be imported into a .bib file or citation database [2].

The following example shows how the eight bibliography items listed above would be entered into a bibtex database:

```
@book{gratzer2013math,
title={Math into LATEX},
author={Gr{\"a}tzer, George},
year={2013},
publisher={Springer Science \& Business Media}
}


@INCOLLECTION{Santal'o1976,
author = {Santal{\'o}, Luis A.},
title = {Integral Geometry and Geometric Probability},
booktitle = {Encyclopedia of Mathematics and its Applications},
publisher = {Addison-Wesley},
year = {1976},
editor = {Rota, Gian C.},
volume = {1},
citeulike-article-id = {2331282},
keywords = {bibtex-import, gestalt},
owner = {mtpham},
posted-at = {2008-02-04 22:10:39},
priority = {0},
timestamp = {2012.05.11}
}

@article{Knuth92,
author = "Knuth D. E.",
title = "Two notes on notation",
journal = "Amer. Math. Monthly",
volume = "99",
year = "1992",
pages = "403--422",
}


@unpublished{Simpson,
author = "Simpson, H.",
title = "Proof of the {R}iemann {H}ypothesis",
note = "preprint (2003), available at
\url{http://www.math.drofnats.edu/riemann.ps}",
}


@INPROCEEDINGS{Pham2011,
```

author = {Pham, M.-T. and Woodford, O.~J. and Perbet, F. and Maki, A. and Stenger,
B. and Cipolla, R.},
title = {A New Distance for Scale-Invariant 3{D} Shape Recognition and Registration},
booktitle = ICCV,
year = {2011},
owner = {owoodford},
timestamp = {2011.04.15}
}

@PATENT{Pham2013,
nationality = {US},
number = {20130016913 (A1)},
year = {2013},
author = {Minh-Tri Pham and Oliver Woodford and Frank Perbet
and Atsuto Maki and Bjorn Stenger and Roberto Cipolla},
title = {An Image Processing Method and System},
language = {English},
owner = {mtpham},
timestamp = {2014.04.16}
}

@ELECTRONIC{Toshiba2011,
author = {Pham, M.-T. and Woodford, O.~J. and Perbet, F. and Maki, A. and Stenger,
B},
year = {2012},
title = {Toshiba {CAD} Model Point Clouds Dataset},
url = {http://www.toshiba.eu/eu/Cambridge-Research-Laboratory/
Computer-Vision-Group/Stereo-Points/},
owner = {owoodford},
timestamp = {2011.07.25}
}

@MANUAL{Motorola1996,
title = {FLEXChip Signal Processor (MC68175/D)},
organization = {Motorola},
year = {1996},
owner = {mtpham},
timestamp = {2014.04.16}
}

The four entries illustrate the most common entry types: article, book, incollection, unpublished. Depending on the bibliography style used, other types may be available, but in most cases the four types suffice. For a complete listing of possible record types, see Chapter 10 in Gratzer's book [3].

Examples of reference

Examples of reference items of different categories shown in the References section include:

- Example of a book in [3, 4]
- Example of a book in a series in [5]
- Example of a journal article in [6–9]
- Example of a conference paper in [10]
- Example of unpublished paper in [11]
- Example of a patent in [12]
- Example of a web page in [13]
- Example of a databook as manual in [14]

Step 2. Loading the bibtex database [1]

Once a bibtex database, say mybibliography.bib, has been created, it can be loaded by placing the following two commands at the end of the main tex file of the paper, just before `\end{document}`.

```
\bibliographystyle{amsplain}
\bibliography{mybibliography}
```

The `\bibliographystyle{...}` entry determines the formatting of bibliographies. There are four commonly used bibliography styles, plain, alpha, amsplain, amsalpha. The latter two may be preferable since those are the styles used by AMS publications. The "plain" versions of these styles generate numeric labels, the "alpha" versions generate alphanumeric labels constructed from the authors' initials and the year of publication. Many publishers have in-house style files and ask authors of accepted papers to prepare final versions using those style files. This requires downloading and installing the publisher's style file; see the page "Installing and using custom packages and styles" for instructions on how to do this.

The `\bibliography{...}` entry tells LaTeX the name of the bibtex database containing the bibliographic information. The argument in braces should be the name of the bibtex file, but without the .bib extension. The above example assumes there is a file mybibliography.bib in the current directory. Note that this file can contain many more records than are needed for the particular paper. This allows one to keep all records in a single personal bibtex database; it also makes it possible to share bibtex databases, and to compile large databases of bibtex records in a particular field and make those available for anyone to use.

Step 3. How to use bibtex in "Communications in Physics Template"

To use CIP bibliography style the author should use the following structure:

```
\bibliographystyle{cip-sty-2019}
\bibliography{\\
```

```
}
```

where `\bibliographystyle{cip-sty-2019}` **declared** to use the CIP bibliography style; `\bibliography{reference-database-name}` **declared** to use the author(s) reference database ("reference-database-name.bib" file).

II.7. Color

Color is valuable, and will be visible to readers of the electronic copy. However ensure that, when printed on a monochrome printer, no important information is lost by the conversion to grayscale.

III. CONCLUSIONS

The paper ends with a conclusion.

APPENDIX

Appendixes, if needed, appear before the acknowledgment.

ACKNOWLEDGMENT

The preferred spelling of the word "acknowledgment" in American English is without an "e" after the "g." Use the singular heading even if you have many acknowledgments. Avoid expressions such as "One of us (S.B.A.) would like to thank ... ." Instead, write "F. A. Author thanks ... ." In most cases, sponsor and financial support acknowledgments are placed in the unnumbered footnote on the first page, not here.

REFERENCES

[1] A. Hildebrand, *Introduction to LATEX*, `http://www.math.uiuc.edu/~hildebr/tex`.

[2] texblog, *Using google scholar to download bibtex citations*, `http://texblog.org/2014/04/22/using-google-scholar-to-download-bibtex-citations/`.

[3] G. Grätzer, *Math into latex*, Springer Science & Business Media, 2013.

[4] V. Arnold, K. Vogtmann and A. Weinstein, *Mathematical methods of classical mechanics*, Graduate Texts in Mathematics, Springer, 1989.

[5] L. A. Santaló, *Integral geometry and geometric probability*, Encyclopedia of Mathematics and its Applications (G. C. Rota, ed.), vol. 1, Addison-Wesley, 1976.

[6] P. Erdős, *A selection of problems and results in combinatorics*, Recent trends in combinatorics (Matrahaza, 1995), Cambridge Univ. Press, Cambridge, pp. 1–6.

[7] W. Fernengel, A. Lehnert, M. Katter, W. Rodewald and B. Wall, *Journal of Magnetism and Magnetic Materials* **157** (1996) 19.

[8] A. Alpher and J. P. N. Fotheringham-Smythe, *Journal of Foo* **13** (2003) 234.

[9] A. Alpher, J. P. N. Fotheringham-Smythe and G. Gamow, *Journal of Foo* **14** (2004) 234.

[10] M.-T. Pham, O. J. Woodford, F. Perbet, A. Maki, B. Stenger and R. Cipolla, *A new distance for scale-invariant 3D shape recognition and registration*, 2011.

[11] H. Simpson, *Proof of the Riemann Hypothesis*, preprint (2003), available at `http://www.math.drofnats.edu/riemann.ps`.

[12] M.-T. Pham, O. Woodford, F. Perbet, A. Maki, B. Stenger and R. Cipolla, *An image processing method and system*, 2013.

[13] M.-T. Pham, O. J. Woodford, F. Perbet, A. Maki and B. Stenger, *Toshiba CAD model point clouds dataset*, 2012.

[14] Motorola, *Flexchip signal processor (mc68175/d)*, 1996.