ICHTML 2023 Authors’ Instructions

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Keywords: The paper must have at least one keyword. For more than one keyword, please use a comma as a separator. Keywords must be titlecased.

Abstract: The abstract should summarize the contents of the paper and should contain at least 70 and at most 200 words.

1 ON THE \LaTeX

You can freely use any \LaTeX\ compatible typesetting system (e.g., TeXStudio + TexLive is a good choice for any operating systems), but if you don’t to be involved into the \LaTeX\ system administration, we propose to use a cloud based \LaTeX\ editors like Overleaf (https://www.overleaf.com). After registering at www.overleaf.com, you can start your paper revision with this template using 'New Project' – 'Upload Project' menu (figure 1).

The next step is to select the template archive (figure 2).

To get a camera-ready version of your paper in PDF, you can click to 'Download PDF' icon or use 'Menu' to download both \LaTeX\ source files (ZIP) and camera-ready version (PDF) (figure 3).

The most-often recommended tutorial is the '(Not So) Short Guide to \LaTeX\2ε' (https://www.ctan.org/tex-archive/info/lshort/).

2 ON THE TEMPLATE

SCITEPRESS proceedings article template provides a consistent \LaTeX\ style for use across SCITEPRESS publications, and incorporates accessibility and metadata-extraction functionality. If you are new to publishing with SCITEPRESS, this document is a valuable guide to the process of preparing your work for publication.

The template is composed by a set of 9 files, in the following 2 groups:

\textbf{Group 1}. To format your paper you will need to copy into your working directory, but NOT edit, the following 7 files:
- apalike.bst
- apalike.sty
- article.cls
- SCITEPRESS.sty
- orcid.eps
- orcid.png
- orcid-eps-converted-to.pdf

\textbf{Group 2}. Additionally, you may wish to copy and edit the following 2 example files:
- example.tex
- example-bibliography.bib

3 FIRST SECTION

This section must be in one column.

3.1 Title and Subtitle

Use the command \texttt{\textbackslash title} and follow the given structure in “example.tex”. The title and subtitle must be with initial letters capitalized (titlecased). The separation between the title and subtitle is done by adding a colon "::" just before the subtitle beginning. In the title or subtitle, prepositions like “is”, “or”, “then”,

\begin{footnotesize}
\begin{itemize}
\item[a] \url{https://orcid.org/0000-0003-0789-0272}
\item[b] \url{https://orcid.org/0000-0002-3522-7673}
\item[c] \url{https://orcid.org/0000-0001-5397-6523}
\item[d] \url{https://orcid.org/0000-0003-4843-0328}
\end{itemize}
\end{footnotesize}
etc. should not be capitalized unless they are the first word of the title or subtitle. No formulas or special characters of any form or language are allowed in the title or subtitle.

### 3.2 Authors and Affiliations

Each author must be defined separately for accurate metadata identification. Multiple authors may share
one affiliation. Authors’ names should not be abbreviated; use full first names wherever possible. Include authors’ ORCIDs and e-mail addresses whenever possible.

The author names and affiliations could be formatted in two ways:

1. Group the authors per affiliation.
2. Use an explicit mark to indicate the affiliations.

Author block example shown in figure 4.

3.2.1 Keywords

Use the command \keywords and follow the given structure:
\keywords{Keyword1, Keyword 2, Last Keyword.}

Each paper must have at least one keyword. If more than one is specified, please use a comma as a separator. Keywords must be titlecased. The sentence must end with a period.

3.2.2 Abstract

Use the command \abstract and follow the given structure:
\abstract{This is an abstract.}

Each paper must have an abstract up to 200 words. The sentence must end with a period.

At the end of first section add a set of commands:
\onecolumn
\maketitle
\normalsize
\setcounter{footnote}{0}
\vfill

4 SECOND SECTION

This section must be in two columns.

Section, subsection and sub-subsection first paragraph should not have the first line indent.

To remove the paragraph indentation (only necessary for the sections), use the command \noindent before the paragraph first word.

4.1 Sectioning Commands

Your work should use standard \LaTeX sectioning commands: \section, \subsection, and \subsubsection. They should be numbered; do not remove the numbering from the commands.

4.1.1 Section Titles

The heading of a section title must be with initial letters capitalized (titlecased):
\section{\uppercase{Second Section}}

4.1.2 Subsection and Sub-Subsection Titles

The heading of a subsection and sub-subsection title should be with initial letters capitalized (titlecased).

Preposition words like “is”, “or”, “then”, etc. should not be capitalized unless they are the first word of the subsection title.

\subsection{Subsection Title}
\subsubsection{Sub-Subsection Title}

4.2 Tables

Tables should be numbered sequentially throughout the text and referred to in the text by number (table 1, etc, rather than tab. 1). Each table should be a float and be positioned within the text at the most convenient place near to where it is first mentioned in the text. It should have an explanatory caption which should be as concise as possible.

Table captions are placed above the table. The final sentence of a caption should end with a period.

Because tables cannot be split across pages, the best placement for them is typically the top of the page nearest their initial cite. To ensure this proper “floating” placement of tables, use the environment \table to enclose the table’s contents and the table caption. The contents of the table itself must go in the \tabular environment, to be aligned properly in rows and columns, with the desired horizontal and vertical rules.

Immediately following this sentence is the point at which table 3 is included in the input file; compare the placement of the table here with the table in the printed output of this document.

Tables must appear inside the designated margins or they may span the two columns. Tables in two columns must be positioned at the top or bottom of the page within the given margins. To span a table in two columns please add an asterisk (*) to the table \begin and \end command:
Tables should be centered and should always have a caption positioned above it. The font size to use is 9-point. No bold or italic font style should be used.

You can find a lot of examples at Overleaf documentation on tables (https://www.overleaf.com/learn/latex/Tables).

### 4.3 Algorithms and Listings

Algorithms and listings captions should have font size 9-point, no bold or italic font style should be used and the final sentence of a caption should end with a period. Captions with one line should be centered and if it has more than one line it should be set to justified.

#### 4.3.1 Program Code

Program listing or program commands in text should be set in typewriter form such as Courier New using `\texttt{}` environments.

Example of a computer program in C:

```c
#include <stdio.h>

int main(int argc, char *argv[])
{
    int i;
    for(i=0; i<argc; i++)
        printf("argv[%d] = %s\n", i, *(argv+i));
}
```

The text must be aligned to the left.

### 4.4 Math Equations

You may want to display math equations in three distinct styles: inline, numbered or non-numbered display. Each of the three are discussed in the next sections.

Equations may be numbered sequentially throughout the text (i.e., (1), (2), (3), ...) or numbered by section (i.e., (1.1), (1.2), (2.1), ...) depending on the author’s personal preference. In articles with several appendices equation numbering by section is useful in the appendices even when sequential numbering has been used throughout the main body of the text: for example, A.1, A.2 and so forth. When referring to an equation in the text, always put the equation number in brackets – e.g. ‘as in equation (2)’ or ‘as in equation (2.1)’ – and always spell out the word ‘equation’ in full, e.g. ‘if equation (5) is factorized’; do not use abbreviations such as ‘eqn.’ or ‘eq.’.

#### 4.4.1 Inline (In-Text) Equations

A formula that appears in the running text is called an inline or in-text formula. It is produced by the `\textit{...}` environment, which can be invoked with the usual `\begin{...}\end{...}` construction or with the short form `$...$`. You can use any of the symbols and structures, from $\alpha$ to $\omega$; this section will simply show a few examples of in-text equations in context. Notice how this equation: $\lim_{n \to \infty} \frac{1}{n} = 0$, set here in in-line math style, looks slightly different when set in display style. (See next subsection).

#### 4.4.2 Display Equations

A numbered display equation – one set off by vertical space from the text and centered horizontally – is produced by the equation environment. An unnumbered display equation is produced by the `\textit{displaymath}` environment (or `equation*` with amsmath package).
Table 3: Frequency of special characters.

<table>
<thead>
<tr>
<th>Non-English or Math</th>
<th>Frequency</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø</td>
<td>1 in 1,000</td>
<td>For Swedish names</td>
</tr>
<tr>
<td>π</td>
<td>1 in 5</td>
<td>Common in math</td>
</tr>
<tr>
<td>$</td>
<td>4 in 5</td>
<td>Used in business</td>
</tr>
<tr>
<td>$\Psi^2$</td>
<td>1 in 40,000</td>
<td>Unexplained usage</td>
</tr>
</tbody>
</table>

Again, in either environment, you can use any of the symbols and structures available in \LaTeX; this section will just give a couple of examples of display equations in context. First, consider the equation, shown as an inline equation above:

$$\lim_{n \to \infty} \frac{1}{n} = 0.$$  (1)

Notice how it is formatted somewhat differently in the displaymath environment. Now, we’ll enter an unnumbered equation:

\begin{displaymath}
S_n = \sum_{i=1}^n x_i ,
\end{displaymath}

and follow it with another numbered equation:

$$\lim_{x \to 0} (1 + x)^{1/x} = e$$  (2)

just to demonstrate \LaTeX’s able handling of numbering.

Usually, equations should be centred and should be numbered with the number on the right-hand side. (You can find an additional examples of alignment at Overleaf documentation on aligning equations with amsmath (https://www.overleaf.com/learn/latex/Aligning_equations_with_amsmath)).

Using \label you can refer to corresponding equation (e.g., equation (2)) by number.

4.5 Figures

Figures must be included in the source code of an article at the appropriate place in the text not grouped together at the end.

Figures should be centered and should always have a caption (see figure 7). Figure captions go below the figure. No bold or italic font style should be used in figure caption. The final sentence of a caption should end with a period.

As much lettering as possible should be removed from the figure itself and included in the caption. If a figure has parts, these should be labelled (a), (b), (c), etc.

Place the figure as close as possible after the point where it is first referenced in the text. If there are a large number of figures it might be necessary to place some before their text citation. Figures should never appear within or after the reference list.

Place two figures side-by-side if they will fit comfortably like this as it saves space. At times it may be convenient to put two figures side by side or the caption at the side of a figure. To put figures side by side, within a figure environment, put each figure and its caption into a minipage with an appropriate width (e.g. 3in or 18pc if the figures are of equal size) and then separate the figures slightly by adding some horizontal space between the two minipages (e.g. \hspace{2in} or \hspace{1.5pc}). To get the caption at the side of the figure add the small horizontal space after the \includegraphics command and then put the \caption within a minipage of the appropriate width aligned bottom, i.e. \begin{minipage}[b]{0.47\columnwidth}

The “figure” environment should be used for figures. One or more images can be placed within a figure.

Figures in two columns must be positioned at the top or bottom of the page within the given margins. To span a figure in two columns please add an asterisk (*) to the \begin and \end command.

For figures with fixed position in text use syntax of figure 7:

\begin{figure}[h]
\centering
\includegraphics[width=0.75\linewidth]{img/example-franklin}
\caption{1907 Franklin Model D roadster.}
\label{fig-0}
\end{figure}

If a figure has parts these should be labelled as (a), (b), (c) etc on the actual figure. Parts should not have separate captions (see figure 8).

\begin{figure}[t]
\begin{center}
\begin{minipage}[b]{0.47\columnwidth}
\end{figure}
Building upon this, a simple benchmark was made to evaluate the gain in getting access to a compute resource with a NVIDIA P100 GPU. A Notebook with the Tensorflow and Keras quick start application [61] was used to get a rough estimate of how much time would be saved in building a simple neural network that classifies images. Listing 5, shows the results of running the notebook on the GPU powered compute resource for ten times in a row, and Listing 4 shows the results of running...
Figure resolution should be at least 300 dpi (we prefer 600 dpi).
Don’t use the lossy compressed images (e.g., JPEG).

5 CITATIONS AND BIBLIOGRAPHIES

References and citations should follow the APA (Author, date) System Convention. Besides that, all references should be cited in the text. No numbers with or without brackets should be used to list the references.

References should be cited in the text by placing sequential numbers in brackets using \cite (for example, (Semerikov et al., 2000), (Kovalchuk et al., 2023; Morkun et al., 2018; Editor, 2007)), and \citet (for example, Spirin (Spirin, 2005), Osadcha and Osadchyi (Osadcha and Osadchyi, 2020), Vakaliuk et al. (Vakaliuk et al., 2021)). A complete reference should provide enough information to locate the article. The terms loc. cit. and ibid. should not be used.

Unpublished conferences and reports should generally not be included in the reference list and articles in the course of publication should be entered only if the journal of publication is known.

A thesis submitted for a higher degree may be included in the reference list if it has not been superseded by a published paper and is available through a library; sufficient information should be given for it to be traced readily:

@phdthesis{Teplytskyi2000:diss, 
  author = "I. O. Teplytskyi", 
  school = "Kryvyi Rih State Pedagogical University", 
  year = 2000, 
  title={Rozvytok tvorchykh zdibnostei shkoliariv zasobamy kompiuternoho modeliuvannia ([D]evelopment of pupils’ creative capacities by means of computer simulation)}, 
  type={The thesis for the degree of candidate of pedagogical sciences on speciality 13.00.02 (theory and methods of teaching informatics)}, 
  note={\url{https://doi.org/10.31812/0564/1599}}
}

5.1 Formatting Reference Lists

The use of Bib\TeX for the preparation and formatting of one’s references is \textbf{mandatory}.

The bibliography is included in your source document with this command, placed just before the
\end{document} command:
\bibliographystyle{apalike}
{\small
 \bibliography{bibfile}
}

where "bibfile" is the name, without the "\,bib" suffix, of the Bib\TeX\ file.

5.2 Bibliographic Data Fields

5.2.1 References to Printed Journal Articles

A normal reference to a journal article is constructed as follows:
@article{Fedorenko_Havrysh_Velychko_2022,
title={Features of using Moodle tools in the training of future social workers},
volume={7},
journal={Educational Dimension},
author={Fedorenko, Olena H. and Havrysh, Olena H. and Velychko, Vladyslav Ye.},
year={2022},
pages={261{281},
note={\url{https://doi.org/10.31812/educdim.4714}}}
}

5.2.2 References to Books, Conference Proceedings and Reports

References to books, proceedings and reports are similar to journal references:

- Complete book
  @book{Morkun,
  author = {Vladimir Morkun and Serhiy Semerikov and Svitlana Hryshchenko},
  title = {Methods of Using Geoinformation Technologies in Mining Engineers' Training},
  year = {2018},
  publisher = {Cambridge Scholars Publishing},
  address = {Newcastle upon Tyne},
  note={\url{https://tinyurl.com/ye27sf7d}}
  }

- Book in series
  @book{Dirac:1958,
  author = {P. A. M. Dirac},
  title = {The Principles of Quantum Mechanics},
  series = {The International Series of Monographs on Physics},
  number = {27},
  edition = {4},
  publisher = {Clarendon Press},
  address = {Oxford},
  year = {1967}
  }

- Book chapter or some part of book
  @inbook{Humboldt:ch1,
  publisher = {Cambridge University Press},
  year = {1999},
  title = {On Language: On the Diversity of Human Language Construction and its Influence on the Mental Development of the Human Species},
  series = {Cambridge Texts in the History of Philosophy},
  author = {Wilhelm von Humboldt},
  editor = {Michael Losonsky},
  chapter = {1},
  pages = {11-22},
  }

(You can also cite any part of book using \citep{pp.110-113}{Dirac:1958} or \citep{chapter 4, pp.98-105}{Dirac:1958}).

- Authored chapter
  @incollection{Shramko2016,
  author = {Shramko, Yaroslav},
  editor = {Bimb\'o, Katalin},
  title = {Truth, Falsehood, Information and Beyond: The American Plan Generalized},
  booktitle = {J. Michael Dunn on Information Based Logics},
  year = {2016},
  publisher = {Springer International Publishing},
  address = {Cham},
  pages = {191-212},
  isbn = {978-3-319-29300-4},
  note={\url{https://doi.org/10.1007/978-3-319-29300-4_11}}
  }

- Article in conference proceedings
  @incollection{Tkachuk2021,
  author = {Tkachuk, Viktoriia and Yechkalo, Yuliia and Semerikov, Serhiy and Kislova, Maria and Hladyr, Yana},
  editor = {Bollin, Andreas and Ermolayev, Vadim and Mayr, Heinrich C. and Nikitchenko, Mykola and Spivakovsky, Aleksander and Tkachuk, Mykola and Yakovyna, Vitaliy and Zholtkevych, Grygoriy},
  title = {Using Mobile ICT for Online Learning During COVID-19 Lockdown},
  booktitle = {Information and Communication}
  }

}
5.2.3 A Case of Non-Latin Sources

When non-Latin alphabet publication cited, the title of the publication (e.g., book or article) in the original language need to be both transliterated and translated in English. Other bibliographic components (including authors, publisher, address and journal name) are transliterated only (Semerikov et al., 2000):

```latex
@article{IA2000,
author = {Semerikov, S. O. and Soloviov, V. M. and Teplytskyi, I. O.},
year = 2000,
title = {Instrumentalne zabezpechennia kursu komputernoho modelluvannia},
journal = {Kompiuter u shkoli i simi},
number = 4,
pages = {28-31},
note = {https://lib.iitta.gov.ua/704129/}
}
```

5.2.4 The ‘apalike’ Bibliography Style in the Web Epoch

The ‘apalike’ bibliography style has been around more or less unchanged since 1988. Back then, web pages didn’t exist yet – at least not as items that might be cited in bibliographies. The entry type `@misc` thus doesn’t recognize, and hence blissfully ignores, fields named url, doi, etc.

A workaround involves encase the URL string in the `note (howpublished)` field in a `\url{...}` wrapper.

Separately, you should also encase the contents of the author and title fields in pairs of curly braces. This prevents Bib\TeX{} from misinterpreting the author as a person and lowering the words in the `title` field:

```latex
@misc{ANCS_CS-SSH,
author = {Academy of Cognitive and Natural Sciences},
title = {ACNS Conference Series: Social Sciences and Humanities},
year = 2022,
note = {https://acnsci.org/cs-ssh/}
}
```

DOI persistent links should be indicated the same way:
```latex
note = {\url{https://doi.org/10.55056/cs-sah/1/01001}}
```

Article numbers should be indicated as pages.

Complete list of entry types which allowed by 'apalike' bibliography style:

- article
- book
- booklet
- inbook
- incollection
- inproceedings (conference)
- manual
- masterthesis
- misc
- phdthesis
- proceedings
- techreport
- unpublished

Complete list of entries which allowed by 'apalike' bibliography style:

- address
- author
- booktitle
- chapter
- edition
- editor
- howpublished
- institution
- journal
- key
- note
- number
- organization
- pages
- publisher
- school
- series
- title
- volume
- year

Any other entry types and entries will be ignored.

5.3 Best Practices: Export Citations into a Bib\TeX{} File

A good way to make your bibliography is to exclude manual creation bibliography items whenever it possible. We strongly recommend to use the “Cite” (export) facilities to Bib\TeX{} which available in the most
Figure 10: Export citations into a BibTeX file.
of OJS installations (figure 10a), ACM Digital Library (figure 10b), Scopus (figure 10c), IEEE Xplore (figure 10d), ScienceDirect (figure 10e), Web of Science (figure 10f) etc.

5.4 Some Examples

A paginated journal article (Kovalchuk et al., 2023), an enumerated journal article (Kavetskyy et al., 2021; Nechypurenko et al., 2022), a monograph (whole book) (Morkun et al., 2018), a monograph/whole book in a series (Harel, 1979), a divisible-book such as an anthology or compilation (Editor, 2007) followed by the same example, however we only output the series if the volume number is given (Editor, 2008) (so series should not be present since it has no volume number), a chapter in a divisible book (Spector, 1990), a chapter in a divisible book in a series (Douglass et al., 1998), a multi-volume work as book (Knuth, 1997), an article in a proceedings (of a conference, symposium, workshop for example) (paginated proceedings article) (Andler, 1979; Makhachashvili and Semenist, 2021), a proceedings article with all possible elements (Smith, 2010), an informally published work (Harel, 1978), a doctoral dissertation (Clarkson, 1985), a master’s thesis: (Anisi, 2003), an online document / world wide web resource (Thornburg, 2001; Ablamowicz and Fauser, 2007; Poker-Edge.Com, 2006), a video game (Case 1) (Obama, 2008) and (Case 2) (Novak, 2003) and (Lee, 2005) and (Case 3) a patent (Scientist, 2009), work accepted for publication (Rous, 2023). Multi-volume works as books (Hörmander, 1985b) and (Hörmander, 1985a). A couple of citations with DOIs: (IEEE, 2004; Kirschmer and Voight, 2010). Online citations: (TUG, 2017; Thornburg, 2001; R Core Team, 2019; Anzaroot and McCallum, 2013).

A lot of citations with \cite: (Shramko and Rossman, 2002; Zhaladk, 1964; Kiv et al., 1995; Shramko and Wansing, 2012; Descartes, 2014; Plato, 2004), Teplytski (Teplytskiy, 2000), Zhaldak (Zhaladak, 2021), Shramko (Shramko, 1999, 2016), Puu and Sushko (Puu and Sushko, 2006), Russell (Russell, 1947), Koryakova and Epimakhov (Koryakova and Epimakhov, 2007), Semerikov et al., 2021; Trius et al., 2004; Konoplya, 2002; Morkun et al., 2014; Vlasenko et al., 2021; Kalitkin and Kuz’mina (Kalitkin and Kuz’mina, 1975), Haveman and Gualtieri (Haveman and Gualtieri, 2016), Kerley (Kerley, 2003), Rutberg et al. (Rutberg et al., 2004), Sutherland (Sutherland, 1968), Von Humboldt (Von Humboldt, 1999), Dirac (Dirac, 1967), Tkachuk et al. (Tkachuk et al., 2021), Goncharov et al. (Goncharov et al., 1966), Fedorenko et al. (Fedorenko et al., 2022).

ACKNOWLEDGEMENTS

Identification of funding sources and other support, and thanks to individuals and groups that assisted in the research and the preparation of the work should be included in an acknowledgement section, which is placed just before the reference section without numbering.

To do so please use the following command:
\section*{Acknowledgements}

\noindent We acknowledge Covidpocalypse 2019 for making the long-awaited completion of this paper possible.

REFERENCES


**APPENDIX**

If any, the appendix should appear directly after the references without numbering, and not on a new page. Just add it before the “\end{document}” command at the conclusion of your source document:

```latex
\section*{Appendix}

Text of appendix
```

```bash
noindent Text of appendix
```