A better way to format your ICSF paper for IOP Conference Series: Earth and Environmental Science

A E Kiv[1,2], S O Semerikov[3,4,5,6,7], P P Nechypurenko[3,7], O V Bondarenko[3,7], A V Iatsyshin[8,9], V O Artemchuk[9,8,10], S V Klimov[11], H B Danylchuk[12], T A Vakaliuk[6,5,3,7], S M Chukharev[11], S I Sakhno[4] and A M Striuk[4,7]

[1] Ben-Gurion University of the Negev, P.O.B. 653, Beer Sheva, 8410501, Israel
[2] South Ukrainian National Pedagogical University named after K. D. Ushynsky, 26 Staroportofrankivska Str., Odesa, 65020, Ukraine
[3] Kryvyi Rih State Pedagogical University, 54 Gagarin Ave., Kryvyi Rih, 50086, Ukraine
[4] Kryvyi Rih National University, 11 Vitalii Matusevych Str., Kryvyi Rih, 50027, Ukraine
[5] Institute for Digitalisation of Education of the NAES of Ukraine, 9 M. Berlynskoho Str., Kyiv, 04060, Ukraine
[6] Zhytomyr Polytechnic State University, 103 Chudnivska Str., Zhytomyr, 10005, Ukraine
[7] Academy of Cognitive and Natural Sciences, 54 Gagarin Ave., Kryvyi Rih, 50086, Ukraine
[8] Center for Information-analytical and Technical Support of Nuclear Power Facilities Monitoring of the NAS of Ukraine, 34a Palladin Ave., Kyiv, 03142, Ukraine
[9] G.E. Pukhov Institute for Modelling in Energy Engineering of the NAS of Ukraine, 15 General Naumov Str., Kyiv, 03164, Ukraine
[10] National Aviation University, 1 Liubomyra Huzara Ave., Kyiv, 03058, Ukraine
[11] National University of Water and Environmental Engineering, 11 Soborna Str., Rivne, 33028, Ukraine
[12] The Bohdan Khmelnytsky National University of Cherkasy, 81 Shevchenko Blvd., Cherkasy, 18031, Ukraine

E-mail: kiv.arnold20@gmail.com, semerikov@gmail.com, acinonyxleo@gmail.com, bondarenko.olga@kdpu.edu.ua, iatsyshyn.andriy@gmail.com, ak24avo@gmail.com, s.v.klimov@nuwm.edu.ua, abdanilchuk@gmail.com, tetianavakaliuk@gmail.com, konf.knu@gmail.com, budfac@gmail.com, andrey.n.stryuk@gmail.com

Abstract. A clear and well-documented LaTeX document is presented as an article formatted for publication by IOP Publishing in a *IOP Conference Series: Earth and Environmental Science*. Based on the "jpconf" document class, this article presents and explains many of the common variations, as well as many of the formatting elements an author may use in the preparation of the documentation of their work. An article abstract should not normally exceed 200 words in a single paragraph. This template don't use any keywords.

1. On the TeX

Already the 3rd proceedings of the ICSF conference is being prepared for publication in the *IOP Conference Series: Earth and Environmental Science*. Working on past proceedings led the editorial board closer to the idea that it is easier to reject a poorly formatted article rather

than spend time editing it and delaying the publication of the complete proceedings volume. As a result, authors are highly recommended to read this handbook from beginning to end before beginning work on their piece. Failure to follow the formatting guidelines will result in the article being rejected at the review stage or even sooner.

Traditionally, we use LaTeX templates for the conference proceedings due to a lot of reasons, the main of them is the attempt to decrease an extra amount of editing efforts for the proceedings editors. You can freely use any LaTeX compatible typesetting system (e.g., TeXstudio + TeX Live 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. After registering at `https://www.overleaf.com`, you can start your paper revision with this template using 'New Project' – 'Upload Project' menu (figure 1).

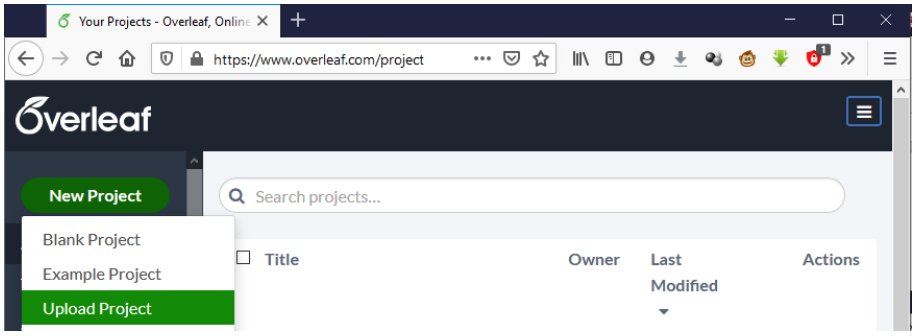

Figure 1. How to upload your project to Overleaf, part 1.

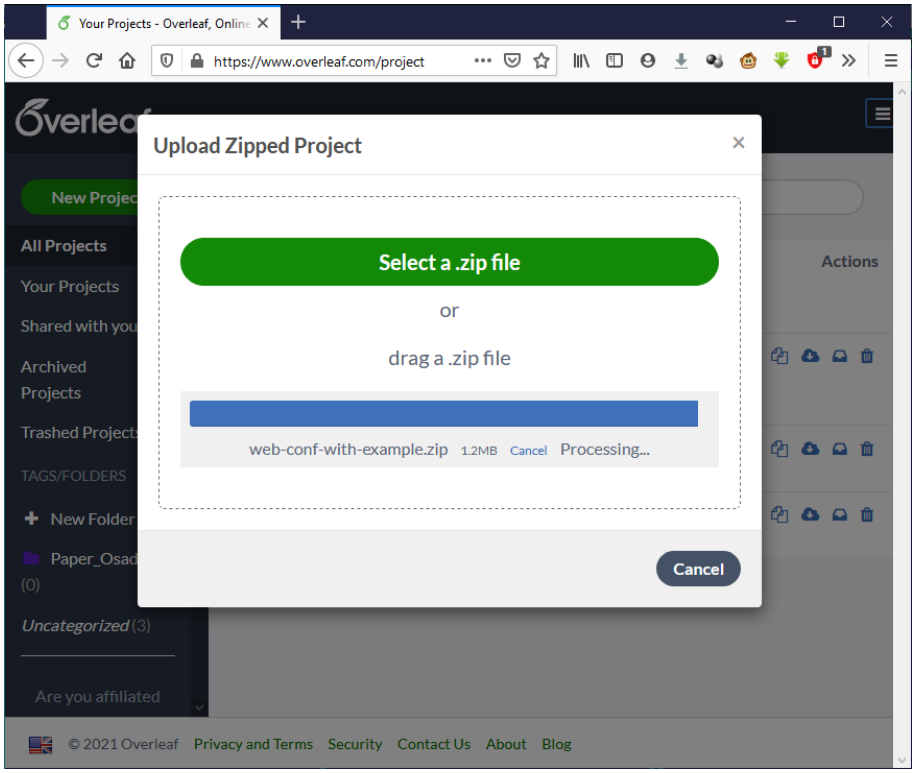

Figure 2. How to upload your project to Overleaf, part 2.

The next step is to select the template archive – you can download it from the conference website (figure 2, figure 3). Alternatively, you can use an online template in Overleaf: `https://www.overleaf.com/latex/templates/icsf-2024-paper-template/cztkbnnrtvvh`.

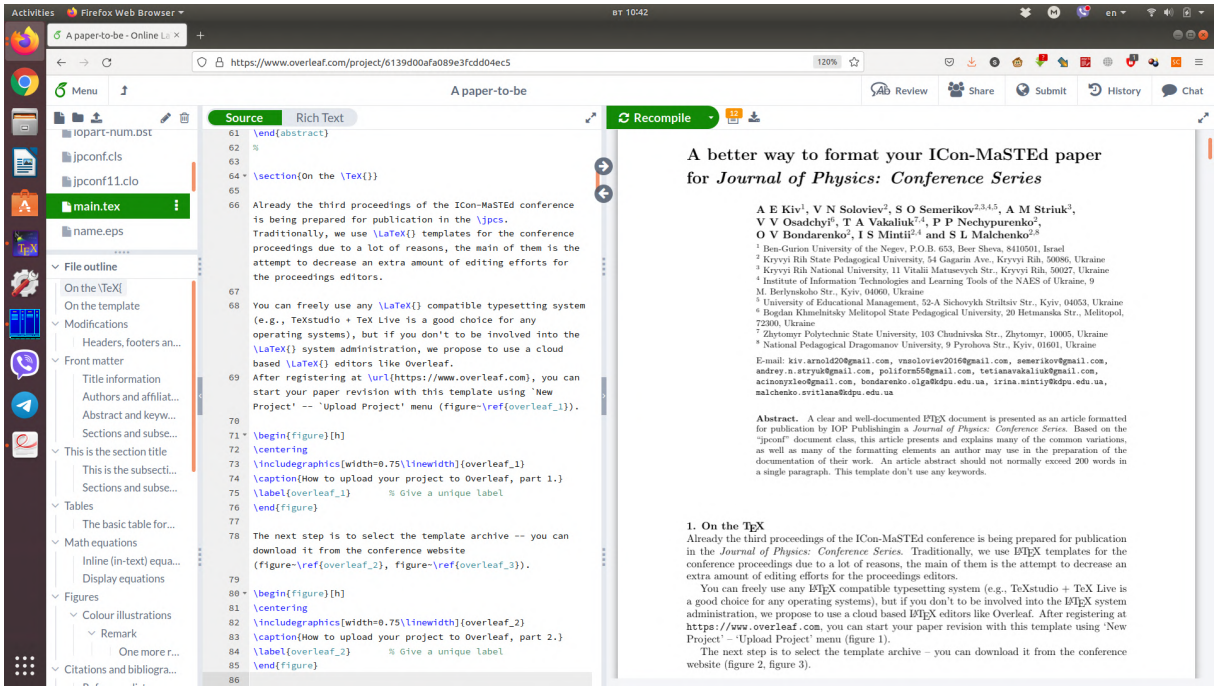

Figure 3. Overleaf, online LaTeX editor.

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 4).

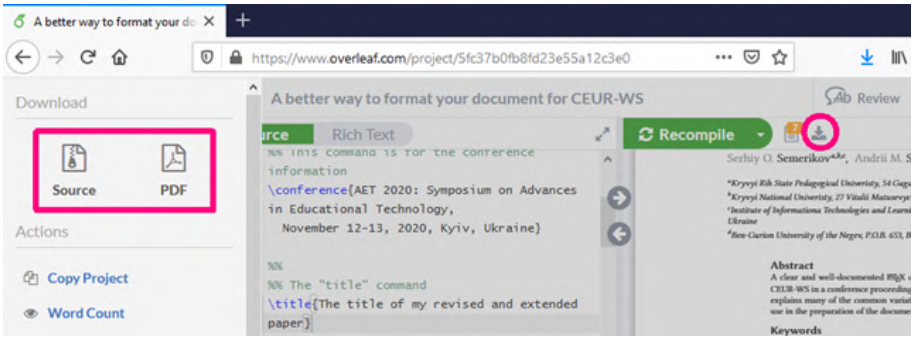

Figure 4. How to download your project from Overleaf.

The most-often recommended tutorials are "The (Not So) Short Introduction to LaTeX2ε". (`https://www.ctan.org/tex-archive/info/lshort/`) and "Learn LaTeX in 30 minutes" (`https://www.overleaf.com/learn/latex/Learn_LaTeX_in_30_minutes`).

2. On the template

`jpconf` requires LaTeX 2ε and can be used with other package files such as those loading the AMS extension fonts `msam` and `msbm` (these fonts provide the blackboard bold alphabet and various

extra maths symbols as well as symbols useful in figure captions); an extra style file `iopams.sty` is provided to load these packages and provide extra definitions for bold Greek letters.

The `iopart-num` BibTeX style is intended for use in preparing manuscripts for Institute of Physics Publishing journals, including *IOP Conference Series: Earth and Environmental Science*. It provides numeric citation with Harvard-like formatting.

If you are new to publishing with *IOP Conference Series: Earth and Environmental Science*, this document is a valuable guide to the process of preparing your work for publication.

To begin the use of template, you need to:

(i) Download and unpack LaTeX template `http://cms.iopscience.iop.org/alfresco/d/d/workspace/SpacesStore/a83f1ab6-cd8f-11e0-be51-5d01ae4695ed/LaTeXTemplates.zip`

(ii) Download and unpack BibTeX style `https://github.com/mark-caprio/iopart-num/archive/refs/heads/master.zip`

(iii) Copy `jpconf.cls` and `jpconf11.clo` from unpacked `LaTeXTemplates.zip`, and `iopams.sty` and `iopart-num.bst` from unpacked `master.zip` to a place where LaTeX can find them or simply copy them in the same directory as the source file of the article.

3. Modifications

Modifying the template – including but not limited to: adjusting margins, typeface sizes, line spacing, paragraph and list definitions, and the use of the `\vspace` command to manually adjust the vertical spacing between elements of your work – is not allowed.

3.1. Headers, footers and page numbers

Authors should *not* add headers, footers or page numbers to the pages of their article – they will be added by IOP Publishing as part of the production process.

4. Front matter

4.1. Title information

The titles of papers should should all use the regular English style: the first letter of the title should be capitalized with the rest in lower case. Use the `title` command to define the title of your work. Do not insert line breaks in your title.

```
\title{A better way to format your document for ICSF conference}
```

4.2. Authors and affiliations

The next information required is the list of all authors' names followed by the affiliations. For the authors' names type `\author{#1}`, where `#1` is the list of all authors' names. The style for the names is initials then surname, with a comma after all but the last two names, which are separated by 'and'. Initials should *not* have full stops.

The addresses of the authors' affiliations follow the list of authors. Each address should be set by using `\address{#1}` with the address as the single parameter in braces. If there is more than one address then a superscripted number, followed by a space, should come at the start of each address. In this case each author should also have a superscripted number or numbers following their name to indicate which address is the appropriate one for them.

Please ensure that affiliations are as full and complete as possible and include the department, institution, full postal address and postal index, and country. If the authors are at different addresses, numbered superscripts should be used after each surname to reference an author to his/her address. Multiple authors may share one affiliation.

Please also provide e-mail addresses for any or all of the authors using an `\ead{#1}` command after the last address. `\ead{#1}` provides the text Email: so `#1` is just the e-mail address or a list of emails.

```
\author{
  A E Kiv$^{1,2}$,
  S O Semerikov$^{3,4,5,6,7}$,
  P P Nechypurenko$^{3,7}$,
  O~V~Bondarenko$^{3,7}$,
  A V Iatsyshin$^{8,9}$,
  V O Artemchuk$^{9,8,10}$,
  S~V~Klimov$^{11}$,
  H B Danylchuk$^{12}$,
  T A Vakaliuk$^{6,5,3,7}$,
  S~M~Chukharev$^{11}$,
  S I Sakhno$^{4}$ and
  A M Striuk$^{4,7}$
}

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  11 Soborna Str., Rivne, 33028, Ukraine}
\address{$^{12}$ The Bohdan Khmelnytsky National University of Cherkasy,
  81 Shevchenko Blvd., Cherkasy, 18031, Ukraine
}

\ead{
  kiv.arnold20@gmail.com, semerikov@gmail.com,
  acinonyxleo@gmail.com, bondarenko.olga@kdpu.edu.ua,
  iatsyshyn.andriy@gmail.com, ak24avo@gmail.com,
  s.v.klimov@nuwm.edu.ua, abdanilchuk@gmail.com,
  tetianavakaliuk@gmail.com, konf.knu@gmail.com,
  budfac@gmail.com, andrey.n.stryuk@gmail.com
}
```

4.3. Abstract and keywords
The abstract follows the addresses and should give readers concise information about the content of the article and should not normally exceed 200 words. **All articles must include an abstract**. To indicate the start of the abstract type `\begin{abstract}` followed by the text of the abstract. The abstract should normally be restricted to a single paragraph and is terminated by the command `\end{abstract}`

```
\begin{abstract}
  This is an abstract.
\end{abstract}
```

Do not enter key words for this journal.
The command `\maketitle` is not required.

4.4. Sections and subsections

```
\section{This is the section title}
\subsection{This is the subsection title}\label{subsection}
```

Cross references to other sections in the text should, where possible, be made using labels (see section 4.4) but can also be made manually.

```
\subsection{Sections and subsections \label{subsection}}
```

5. 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. Captions should be placed at the top of the table and should have a full stop (period) at the end.

5.1. The basic table format
The standard form for a table is:

```
\begin{table}
\caption{Table caption.}
\label{label}
\centering
\begin{tabular}{llll}
\br
Head 1&Head 2&Head 3&Head 4\\
\mr
1.1&1.2&1.3&1.4\\
2.1&2.2&2.3&2.4\\
\br
\end{tabular}
\end{table}
```

The above code produces table 1.
Points to note are:

1. The caption comes before the table.

Table 1. Table caption.

Head 1	Head 2	Head 3	Head 4
1.1	1.2	1.3	1.4
2.1	2.2	2.3	2.4

2. The normal style is for tables to be centred in the same way as equations. This is accomplished by using `\centering`.
3. The default alignment of columns should be aligned left.
4. Tables should have only horizontal rules and no vertical ones. The rules at the top and bottom are thicker than internal rules and are set with `\br` (bold rule). The rule separating the headings from the entries is set with `\mr` (medium rule). These commands do not need a following double backslash.
5. Numbers in columns should be aligned as appropriate, usually on the decimal point; to help do this a control sequence `\lineup` has been defined which sets `\0` equal to a space the size of a digit, `\m` to be a space the width of a minus sign, and `\-` to be a left overlapping minus sign. `\-` is for use in text mode while the other two commands may be used in maths or text. (`\lineup` should only be used within a table environment after the caption so that `\-` has its normal meaning elsewhere.) See table 2 for an example of a table where `\lineup` has been used.

Table 2. A simple example produced using the standard table commands and `\lineup` to assist in aligning columns on the decimal point. The width of the table and rules is set automatically by the preamble.

A	*B*	*C*	*D*	*E*	*F*	*G*
23.5	60	0.53	−20.2	−0.22	1.7	14.5
39.7	−60	0.74	−51.9	−0.208	47.2	146
123.7	0	0.75	−57.2	–	–	–
3241.56	60	0.60	−48.1	−0.29	41	15

You can find a lot of examples at *Overleaf documentation on tables*.

6. 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.'.

6.1. 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 `math` 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 α to ω; this section will simply show a few examples of in-text equations in context. Notice how this equation: $\lim_{n\rightarrow \infty} \frac{1}{n} = 0$, set here in in-line math style, looks slightly different when set in display style. (See next subsection).

6.2. 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 `displaymath` environment (or `equation*` with `amsmath` package).

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:

```
\begin{equation}
\lim_{n\rightarrow \infty} \frac{1}{n} = 0.
\end{equation}
```

$$\lim_{n\rightarrow \infty} \frac{1}{n} = 0. \tag{1}$$

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}
```

$$S_n = \sum_{i=1}^{n} x_i,$$

and follow it with another numbered equation:

```
\begin{equation}\label{lim}
\lim_{x \to 0} (1 + x)^{1/x} = e
\end{equation}
```

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

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*).

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

In addition to the standard `\ref{<label>}`, the table 3 provides alternative commands for quickly writing cross-references.

7. 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.

Each figure should have a brief caption describing it and, if necessary, interpreting the various lines and symbols on the figure. As much lettering as possible should be removed from the figure

Table 3. Alternatives to the \ref command for writing cross-references, as defined in the jpconf.cls style file.

Command	Result
\eref{<label>}	(<num>)
\Eref{<label>}	Equation (<num>)
\fref{<label>}	figure <num>
\Fref{<label>}	Figure <num>
\sref{<label>}	section <num>
\Sref{<label>}	Section <num>
\tref{<label>}	table <num>
\Tref{<label>}	Table <num>

itself and included in the caption. If a figure has parts, these should be labelled (a), (b), (c), etc. Table 4 gives the definitions for describing symbols and lines often used within figure captions (more symbols are available when using the optional packages loading the AMS extension fonts).

Table 4. Control sequences to describe lines and symbols in figure captions.

Control sequence	Output	Control sequence	Output
\dotted	·····	\opencircle	○
\dashed	- - - -	\opentriangle	△
\broken	– – –	\opentriangledown	▽
\longbroken	— — —	\fullsquare	■
\chain	— · —	\opensquare	□
\dashddot	— · · —	\fullcircle	●
\full	———	\opendiamond	◊

Authors should try and use the space allocated to them as economically as possible. 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.

Individual figures should normally be centred but 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]{3in} etc.

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

Your figures should contain a caption which describes the figure to the reader (see figure 8). Figure captions go below the figure. Your figures should also include a description suitable for screen readers, to assist the visually-challenged to better understand your work.

For figures with fixed position in text use syntax of figure 8:

Figure 5. Figure caption for first of two sided figures.

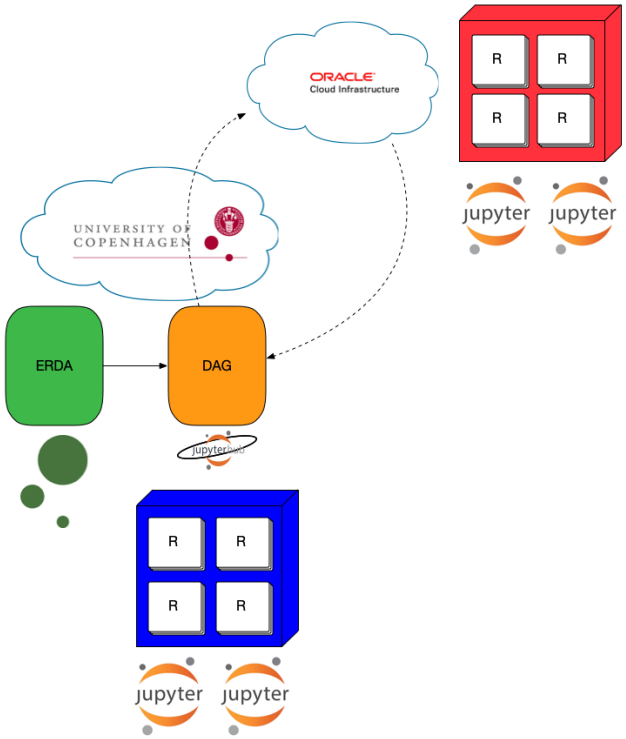

Figure 6. Figure caption for second of two sided figures.

reserved for figure

Figure 7. Figure caption for a narrow figure where the caption is put at the side of the figure.

```
\begin{figure}[h]
\centering
\includegraphics[width=0.75\linewidth]{img/franklinmodeld}
\caption{Mrs. F. S. Bliven in auto (circa 1908).}
\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 9).

```
\begin{figure}[t]
```

Figure 8. Mrs. F. S. Bliven in auto (circa 1908).

```
\begin{center}
\begin{minipage}[b]{0.47\columnwidth}
\includegraphics[width=1\columnwidth]{name.eps}
\begin{center}\pt(a)\end{center}
\end{minipage}
\hspace{0.04\columnwidth}
\begin{minipage}[b]{0.47\columnwidth}
\includegraphics[width=1\columnwidth]{name.eps}
\begin{center}\pt(b)\end{center}
\end{minipage}
\end{center}
\caption{\label{fig5}A caption of figure of two parts, \pt(a) and \pt(b).}
\end{figure}
```

7.1. Colour illustrations

You are free to use colour illustrations for the online version of *Journal of Physics: Conference Series*.

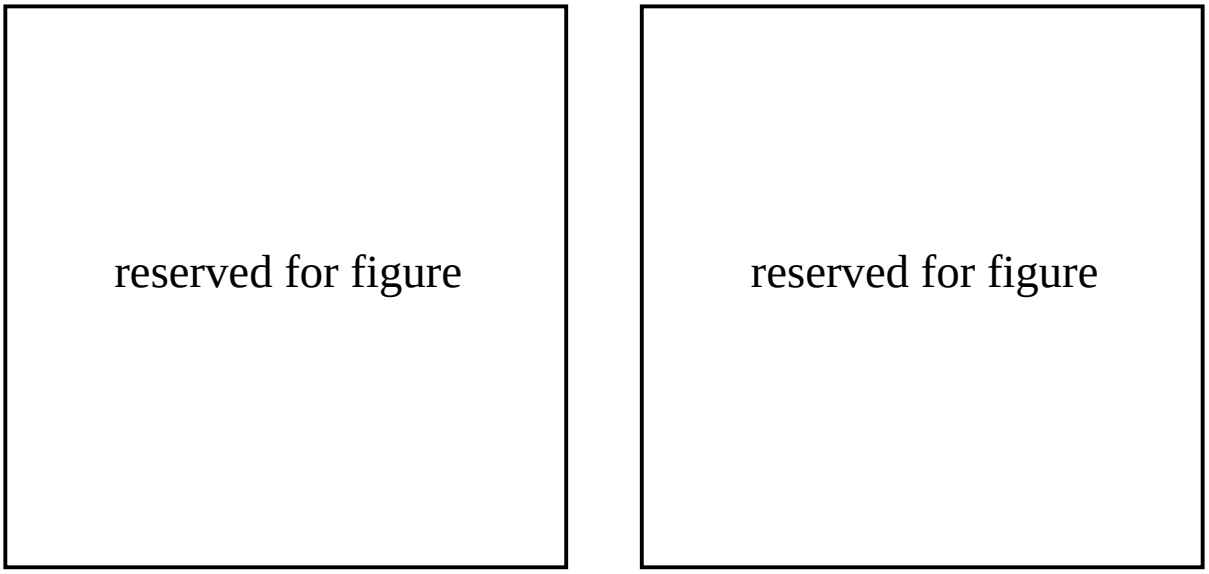

Figure 9. A caption of figure of two parts, (*a*) and (*b*).

7.1.1. Remark: Use over 300 dpi resolution for your figures (we prefer 600 dpi).

One more remark: Don't use the lossy compressed images (e.g., JPEG).

8. Citations and bibliographies

As part of the production system for *Journal of Physics: Conference Series*, online versions of all reference lists will, wherever possible, be linked electronically using CrossRef. **It is *vitally* important for all the references to be accurate and to be carefully formatted using the guidelines below, otherwise delays may be incurred and the references may not link through CrossRef.**

Two different styles of referencing are in common use: the Harvard alphabetical system and the Vancouver numerical system. For *Journal of Physics: Conference Series*, the Vancouver numerical system is preferred but authors should use the Harvard alphabetical system if they wish to do so. In the numerical system references are numbered sequentially throughout the text within square brackets, like this [2], and one number can be used to designate several references.

8.1. Reference lists

A complete reference should provide the reader with enough information to locate the article concerned, whether published in print or electronic form, and should, depending on the type of reference, consist of:

- name(s) and initials;
- date published;
- title of journal, book or other publication;
- titles of journal articles may also be included (optional);
- volume number;
- editors, if any;

- town of publication and publisher in parentheses for *books*;
- the page numbers.

Up to ten authors may be given in a particular reference; where there are more than ten only the first should be given followed by '*et al*'. If an author is unsure of a particular journal's abbreviated title it is best to leave the title in full. 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.

8.2. Formatting reference lists

Numeric reference lists should contain the references within an unnumbered section (such as `\section*{References}`).

The use of BibTEX for the preparation and formatting of one's references is mandatory.

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

```
\bibliography{bibfile}
```

where "`bibfile`" is the name, without the "`.bib`" suffix, of the BibTEX file.

9. Bibliographic data fields

9.1. References to printed journal articles

A normal reference to a journal article is constructed as follows:

```
@article{Tkachuk_Yechkalo_Semerikov_2019,
  author={Tkachuk, Viktoriia V. and Yechkalo, Yuliia V.
    and Semerikov, Serhiy O.},
  title={The research of process of applying mobile {ICT} by university
   students: mobile testing systems and mobile means of multimedia development},
  journal={Educational Dimension},
  year={2019},
  volume={1},
  pages={125-146},
  url={https://doi.org/10.31812/educdim.v53i1.3839}
}
```

9.2. References to Journal of Physics: Conference Series articles

Each conference proceeding published in *Journal of Physics: Conference Series* will be a separate *volume*; references should follow the style for conventional printed journals. For example:

```
@article{Striuk_2022,
  url = {https://doi.org/10.1088/1742-6596/2288/1/012012},
  year = 2022,
  month = {jun},
  publisher = {{IOP} Publishing},
  volume = {2288},
  issue = {1},
```

```
  pages = {012012},
  author = {A M Striuk and S O Semerikov},
  title = {Professional competencies of future software engineers in the
    software design: teaching techniques},
  journal = {Journal of Physics: Conference Series}
}
```

9.3. References to preprints

- Institutional preprints or technical reports

```
@techreport{Kalitkin:1975,
  author = {Kalitkin, N. N. and Kuz'mina, L. V.},
  title = {Tables of thermodynamic functions of
     matter at high concentration of energy},
  type={Preprint},
  number = {35},
  institution = {Institute of Applied Mathematics of
     the USSR Academy of Sciences},
  address = {Moscow},
  year = {1975},
}

@techreport{Kerley2003,
  author = {Kerley, G. I.},
  title = {Equations of state for titanium and {Ti6A14V} alloy},
  type = {Report},
  number = {SAND 2003-3785},
  institution = {Sandia National Laboratories},
  address = {Albuquerque, NM},
  year = {2003}
}
```

- Patents

```
@techreport{Rutberg2004,
  author={Rutberg, {\relax Ph} G and Safronov, A A and Shiryaev, V N},
  title={Three-phase ac plasma generator},
  type={Patent},
  number={RU 2231936},
  year={2004}
}
```

9.4. References to books, conference proceedings and reports

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

- Complete book

```
@book{Goossens:1993,
  author = {Michel Goossens and Frank Mittelbach and Alexander Samarin},
  title = {The LaTeX Companion},
  year = {1993},
  publisher ={Addison-Wesley},
  address = {Reading, MA}
```

```
}
```

- 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{Nikiforov_Novikov_Uvarov2005:ch1,
  author = {Nikiforov, A. F. and Novikov, V. G. and Uvarov, V. B.},
  title = {Quantum-Statistical Models of Hot Dense Matter},
  publisher = {Birkh\"{a}user Verlag},
  address = {Basel},
  year = {2005},
  chapter = {1},
  pages = {3--28}
}
```

(You can also cite any part of book using `\cite[pp 110--3]{Dirac:1958}` or `\cite[chapter 4, pp 98--105]{Dirac:1958}`)

- Authored chapter

```
@incollection{Morse:1996,
  author = {M. Morse},
  title = {Supersonic beam sources},
  booktitle = {Atomic Molecular and Optical Physics},
  editor = {F. B. Dunning and R. Hulet},
  series = {Experimental Methods in the Physical Sciences},
  volume = {29},
  publisher = {Academic},
  address = {San Diego},
  year = {1996}
}
```

- Article in conference proceedings

```
@incollection{TkachukYechkaloSemerikovKislovaHladyr_2021_0,
  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}",
  url={https://doi.org/10.1007/978-3-030-77592-6_3},
  booktitle="Information and Communication Technologies in Education,
    Research, and Industrial Applications",
  year="2021",
  publisher="Springer International Publishing",
  address="Cham",
  pages="46--67",
  isbn="978-3-030-77592-6"
}
```

or `@CONFERENCE` or `@inproceedings`.

9.5. Special bibliographic data fields

9.5.1. Journal sections. Under IOP style conventions, journal names should be set in italic type. However, for journals with multiple lettered sections, the IOP convention is that the journal section letter should appear in roman type after the main journal name, *e.g.*, "*J. Phys.* A". Most existing BibTeX styles do not make special provision for lettered sections. Therefore, typically, the section letter is either included as part of the journal name

```
journal = "J. Phys. A",
volume = "38",
```

or as part of the volume number

```
journal = "J. Phys.",
volume = "A38",
```

in the BibTeX database entry. The `iopart-num` style instead introduces a new optional field `section` which can be used to specify a journal section letter. This section letter is set in roman type. Moreover, if the section letter already appears in *any* of the usual locations in the database entry (at the end of the journal name, before the volume number, or after the volume number), `iopart-num` will recognize it and suppress its printing. Therefore, when you are creating the BibTeX database entry for an article in a lettered journal section, you can still include the section letter in the `journal` or `volume` fields, for use with other BibTeX styles, without adversely affecting the formatting for IOP journals. For example, the entry for ref. [1] can be generated with

```
journal = "J. Phys. A",
section = "A",
volume = "38",
```

or

```
journal = "J. Phys.",
section = "A",
volume = "A38",
```

or simply

```
journal = "J. Phys.",
section = "A",
volume = "38",
```

in the BibTeX database entry. Note that section names longer than a single letter are also supported (*e.g.*, "*Phys. Rev.* ST Accel. Beams").

9.5.2. Journal issue numbers. Journal issue numbers are not customarily included in references to journal articles under the IOP formatting conventions. Therefore, the `iopart-num` style ignores the `number` field for articles. However, in some periodicals (such as popular magazines or certain journal online supplements), pagination restarts from 1 with each issue. For such periodicals, the issue number is an essential part of the bibliographic information needed to identify an article. The `iopart-num` style therefore supports an additional field `issue` in the BibTeX database entry, which can be used to enforce printing of the issue number. If a value is specified for `issue`, this value is included included parenthetically after the volume number in the reference, as in ref. [2].

9.5.3. Multivolume books. The IOP guidelines distinguish between a volume in a *series* and a volume of a *multivolume book* or *set*. For a volume in a series, the series title and volume number are given in parentheses after the book title [3]. For an individual volume in a multivolume book, the book title is given first, followed by the volume number and volume title [4].

The `iopart-num` style supports an additional field `volumetitle` in the BibTeX database entry, which can be used to specify the title for an individual volume of a multivolume book, as in refs. [4, 5]. For example, the entry for ref. [5] is generated with

```
title = "Nuclear Structure",
volume = 2,
volumetitle = "Nuclear Deformations",
```

in the BibTeX database entry. In contrast, most existing BibTeX styles allow you to reference a volume of a multivolume book by specifying `title` and `volume`, as in refs. [6, 7], but do not provide for inclusion of any specific title for the individual volume. A volume in a series [3, 8] is indicated in `iopart-num`, as in most other BibTeX styles, by specifying `title`, `volume`, and `series` in the BibTeX database entry.

9.5.4. E-prints, collaborations, and other data fields. The `iopart-num` style supports several additional data fields (`collaboration`, `eid`, `eprint`, `numpages`, and `url`).

9.6. A case of non-Latin source

When non-Latin alphabet publication cited in an English publication, 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 [9]:

```
@article{IA2000,
  author ={Semerikov, S. O. and Soloviov, V. M. and Teplytskyi, I. O.},
  year=2000,
  title= {Instrumentalne zabezpechennia kursu kompiuternoho modeliuvannia
    [{I}nstrumental support of the course of computer modeling]},
  journal= {Kompiuter u shkoli i simi},
  issue=4,
  pages={28-31},
  url={https://lib.iitta.gov.ua/704129/}
}
```

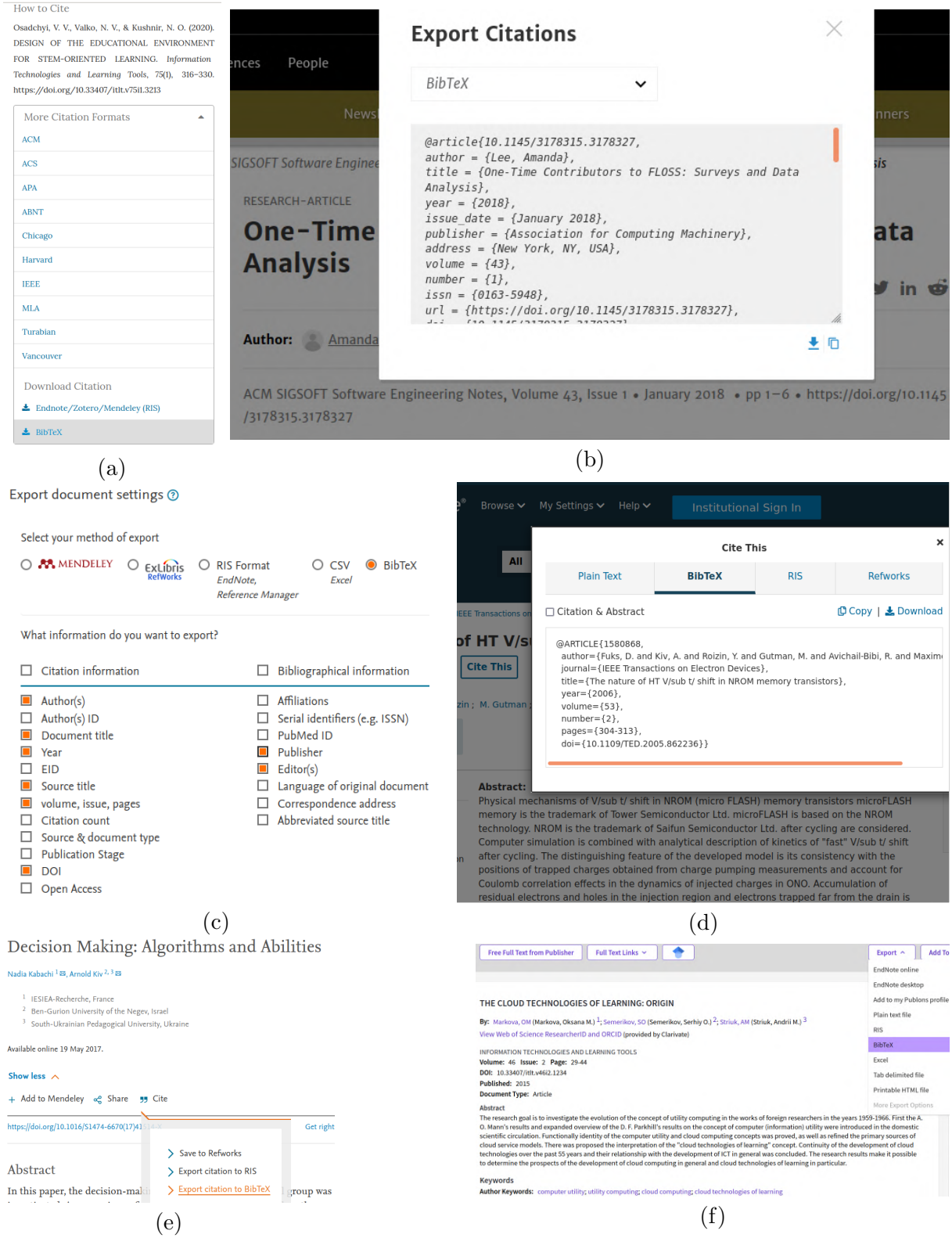

Figure 10. Export citations into a BibTeX file.

9.7. Best practices: export citations into a BibTeX *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 BibTeX which available in the most 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.

9.8. Some examples
A paginated journal article [10], an enumerated journalarticle [11, 12], a monograph (whole book) [13], a monograph/whole book in a series (see 2a in spec. document) [14], a divisible-book such as an anthology or compilation [15] followed by the same example, however we only output the series if the volume number is given [16] (so series should not be present since it has no volume number), a chapter in a divisible book [17], a chapter in a divisible book in a series [18], a multi-volume work as book [19], an article in a proceedings (of a conference, symposium, workshop for example) (paginated proceedings article) [20], a proceedings article with all possible elements [21], an example of an enumerated proceedings article [22], an informally published work [23], a doctoral dissertation [24], a master's thesis: [25], a preprint: [26], an online document / world wide web resource [27–29], a video game (Case 1) [30] and (Case 2) [31] and [32] and (Case 3) a patent [33], work accepted for publication [34], prolific author [35] and [36]. Other cites might contain 'duplicate' DOI and URLs (some SIAM articles) [37]. Multi-volume works as books [38] and [39]. A couple of citations with DOIs: [37, 40]. Online citations: [27, 41–43].

Refs. [3, 6, 44–49] are based upon example entries from the IOP guidelines.

A lot of citations can be joined by adding the `\usepackage{cite}` to document preamble: [1, 2, 7, 50–75].

Acknowledgments
Authors wishing to acknowledge assistance or encouragement from colleagues, special work by technical staff or financial support from organizations should do so in an unnumbered Acknowledgments section immediately following the last numbered section of the paper. The command `\ack` sets the acknowledgments heading as an unnumbered section.

ORCID iDs
We recommend that the authors add their ORCID iDs between the acknowledgments section and the reference section. For example:

A E Kiv `https://orcid.org/0000-0002-0991-2343`
S O Semerikov `https://orcid.org/0000-0003-0789-0272`

The command `\section*{ORCID iDs}` is used to signify the start of the ORCID iDs section:

```
\section*{ORCID iDs}
A E Kiv \url{https://orcid.org/0000-0002-0991-2343}\\
S O Semerikov \url{https://orcid.org/0000-0003-0789-0272}
```

If the paper does not have an acknowledgements section, the ORCID iDs section should follow the conclusion.

Appendix A. Appendices

Technical detail that it is necessary to include, but that interrupts the flow of the article, may be consigned to an appendix. Any appendices should be included at the end of the main text of the paper, after the acknowledgments section (if any) but before the reference list. If there are two or more appendices they will be called Appendix A, Appendix B, etc. Numbered equations will be in the form (A.1), (A.2), etc, figures will appear as figure A1, figure B1, etc and tables as table A1, table B1, etc.

The command `\appendix` is used to signify the start of the appendixes. Thereafter `\section`, `\subsection`, etc, will give headings appropriate for an appendix:

```
\appendix
\section{Appendix title 1}
\section{Appendix title 2}
\section{Appendix title 3}
```

To obtain a simple heading of 'Appendix' use the code `\section*{Appendix}`. If it contains numbered equations, figures or tables the command `\appendix` should precede it and `\setcounter{section}{1}` must follow it.

```
\appendix
\section*{Appendix}
\setcounter{section}{1}
```

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