

# INSTRUCTIONS FOR AUTHORS OF PAPERS USING L<sup>A</sup>T<sub>E</sub>X

Román Cárdenas<sup>a,b</sup> and Bentley James Oakes<sup>c</sup>

<sup>a</sup>Integrated Systems Laboratory, Universidad Politécnica de Madrid, Spain  
*r.cardenas@upm.es*

<sup>b</sup>Advanced Real-Time Simulation Laboratory, Carleton University, Canada

<sup>c</sup>Computer and Software Engineering, Polytechnique Montréal, Canada  
*bentley.oakes@polymtl.ca*

## ABSTRACT

This set of instructions for producing a proceedings paper for The Society for Modeling & Simulation International (SCS) with L<sup>A</sup>T<sub>E</sub>X also serves as a sample file that you can edit to produce your submission, and a checklist to ensure that your submission meets the SCS requirements. Please follow the guidelines herein when preparing your paper. Failure to do so may result in a paper being rejected, returned for appropriate revision, or edited without your knowledge. **Note that initial submissions are double blind, so authors must not be included when submitting your manuscript.**

**Keywords:** instructions, author's kit, conference publication. (3-5 keywords separated by a comma.)

## 1 INTRODUCTION

This paper provides instructions for the preparation of papers for the Society for Modeling & Simulation International (SCS) using L<sup>A</sup>T<sub>E</sub>X. The easiest way to write a paper using L<sup>A</sup>T<sub>E</sub>X that complies with the requirements is to edit the source file, `scs23paper.tex` for this document. Please do not use an older version, as some specifications may have changed. An author kit is available via the conference website, including this L<sup>A</sup>T<sub>E</sub>X document.

## 2 GENERAL GUIDELINES

### 2.1 Language

The paper should be prepared using U.S. English to ensure consistency across the proceedings. Please carefully check the spelling of words before you submit your paper. There are spell checkers for L<sup>A</sup>T<sub>E</sub>X as well. Some examples of software that supports spell-checking are TexnicCenter, TexMaker, and TexClipse.

### 2.2 Objectivity

The paper's content should be objective and without any appearance of commercialism. Comparisons of commercial software should be avoided unless they are central to the topic. If a comparison of commercial software is included, it should be based on objective analysis that provides for criteria, a description of ranking methodology on each criterion, and the rankings themselves to arrive at the conclusion. If an approach other than a detailed objective analysis is used to select the simulation software used for the study

being reported, such as the availability of the software, or the familiarity of the analyst with the software, it should be clearly identified. To ensure suitability for an international audience, please pay attention to the following:

- Write in a straightforward style.
- Try to avoid long or complex sentence structures.
- Briefly define or explain all technical terms that may be unfamiliar to readers.
- Explain all acronyms the first time they are used in your text – e.g., “Digital Signal Processing (DSP)”.
- Explain local references (e.g., not everyone knows all city names in a particular country).
- Explain “insider” comments. Ensure that your whole audience understands any reference whose meaning you do not describe (e.g., do not assume that everyone has used a Macintosh or a particular application).
- Explain colloquial language and puns. Understanding phrases like “red herring” may require a local knowledge of English. Humor and irony are difficult to translate.
- Use unambiguous forms for culturally localized concepts, such as times, dates, currencies and numbers (e.g., “1-5- 97” or “5/1/97” may mean 5 January or 1 May, and “12/10/11” can be even more confusing, and “seven o’clock” may mean 7:00 am or 7:00 pm). For currencies, indicate English equivalences – e.g., “Participants were paid 10,000 lire, or roughly \$5.”
- Be careful with the use of gender-specific pronouns (he, she) and other gendered words (chairman, manpower, man-months). Use inclusive language that is gender-neutral (e.g., she or he, they, s/he, chair, staff, staff-hours, person-years).
- If possible, use the full (extended) alphabetic character set for names of persons, institutions, and places (e.g., Grønbæk, Lafrenière, Sánchez, Universität, Weißenbach, Züllighoven, Århus, etc.).

## **2.3 Paper Submission**

Please, refer to the author’s guidelines document in the author’s kit.

## **2.4 Length Constraints**

### **2.4.1 The Abstract and Keywords**

**The abstract should be at most 150 words.** Since abstracts of all papers accepted for publication in the proceedings will also appear in the final program, the length limit of 150 words will be strictly enforced for each abstract. The abstract should consist of a single paragraph, and it should not contain references or mathematical symbols.

The list of keywords should have no more than five keywords that will identify your paper in indices and databases (required). Do not use the words “computer”, “simulation”, “model”, or “modeling”, since these are all assumed.

### **2.4.2 Length of the Paper**

The page size in the proceedings must be 8.5 inches by 11 inches (21.6 cm by 27.9 cm). The overall length of the paper should be at least 5 proceedings pages. **Papers should be at most 12 pages.**

### **2.4.3 Font Specification and Spacing**

The paper should be set in Times New Roman font using an 11-point font size and it should be single-spaced. Do not use other fonts; the use of other fonts means the proceedings editors will need to send the paper back to you to change the font.

These settings are automatically applied by the class file used for this document, thus you are asked not to change these settings in your paper. If you want to use bold Greek symbols you should use the `\bm` package.

### **2.4.4 Margins**

The width of the text area is 6.5 inches (16.0 cm). The left and right margins should be 1 inch (2.54 cm) on each page. The top margin shall be 0.89 inches (2.24 cm) including the header, and the bottom of the pages shall be 0.67 inches (1.7 cm). These settings are automatically applied by the class file used for this document, thus you are asked not to change these settings in your paper.

### **2.4.5 Justification**

Headings of sections, subsections, and subsubsections should be left justified. One-line captions for figures or tables should be centered. A multiline caption for a figure or table should be fully justified. All other text should be fully justified across the page (that is, the text should line up on the right-hand and left-hand sides of the page). These settings are automatically applied by the class file used for this document.

## **2.5 Headings of Sections, Subsections, and Subsubsections**

Section, subsection, and subsubsection headings should appear flush left, set in the bold font style, and numbered as shown in this document. The headings for the Abstract, Acknowledgments, References, and Author Biographies sections are not numbered. These settings are automatically applied by the class file used for this document.

To suppress the section numbers, use the `\section*{}` command.

Section headings should be set in **FULL CAPITALS LIKE THIS PHRASE**, while subsection and subsubsection headings should be **Capitalized in Headline Style like This Phrase**. These settings are automatically applied by the class file used for this document.

### **2.5.1 Paragraphs**

The paragraphs should not be indented. The normal style will add a space between paragraphs, do not insert additional space between paragraphs.

### **2.5.2 Footnotes**

**Do not use footnotes;** instead incorporate such material into the text directly or parenthetically.

### **2.5.3 Page Numbers**

**Do not include page numbers.** Page numbers are generated by the proceedings editors once all accepted papers are ordered for the final proceedings.

### 3 FORMATTING THE FIRST PAGE

#### 3.1 Running Heads

The running head (provided in the template) in the lower left-hand corner of the first page (*which should read the proceedings name, editors' name, conference name, location, and the name of the Society*) is left-justified and set in the 9-point italic font style. You will need to **uncomment the appropriate version of the track or symposium name** at the beginning of `scs23paper.tex`, depending on where you are going to submit your paper.

Running heads on the second and subsequent pages should contain the last names of the authors, centered and set in the 10-point italic font style. For example, running heads for papers with varying numbers of authors would appear like *Yilmaz* (single author), or *Yilmaz and Chan* (two authors), or *Yilmaz, Chan, and Moon* (three authors), or *Yilmaz, Chan, Moon, and Roeder* (four authors). These are created by using the following macro:

```
\SCSpagesetup{LastName1, LastName2, and LastNameLastAuthor}
```

located just after the `\begin{document}` of this `.tex` file.

Please use this macro to set up the running heads, as it sets further parameters important for the correct layout of the document. List all authors; do not use *et al.* The author names are listed in the same order as they appear on the title page. This will be the same order when providing the author's biographies at the end of the paper.

#### 3.2 Title and Authors

Center the title of the paper on the page and set it in bold 12pt **FULL CAPITALS**. The top edge of the title should begin at least 1.25 inches from the top of the page. The correct placement is automatically done by the class file as well. Just use the `\title` and `\maketitle` commands as it is done in the source of this document. Multiline titles should have about the same amount of text on each line. There should be 1 blank line between the title and the authors' names (will be inserted by the class file if the `\author`, `\title`, and `\maketitle` commands are used).

You should use the `\author` command to enter author names. See the `.tex` source file for this document. The author's first name should be listed first and with no job title or honorific. Use the `\authorrefmark` command with a number parameter to indicate the affiliation of each author. For multiple affiliations, use a space between these `\authorrefmark` commands. For papers with multiple authors, the authors should be listed in order of decreasing contribution.

### 4 FORMATTING SUBSEQUENT PAGES

Please refer to Section 2.4.4 for the correct margins.

#### 4.1 Mathematical Expressions in Text and in Displays

Display only the most important equations, and number only the displayed equations that are explicitly referenced in the text. To conserve space, simple mathematical expressions such as  $\bar{Y} = n^{-1} \sum_{i=1}^n Y_i$  may be incorporated into the text. Mathematical expressions that are more complicated or that must be referenced later should be displayed, as in

$$s^2 = \frac{1}{n-1} \sum_{i=1}^n (Y_i - \bar{Y})^2.$$

If a display is referenced in the text, then enclose the equation number in parentheses and place it flush with the right-hand margin of the column. For example, the quadratic equation has the general form

$$ax^2 + bx + c = 0, \text{ where } a \neq 0. \quad (1)$$

In the text, each reference to an equation number should also be enclosed in parentheses. For example, the solution to (1) is given in (2) in Appendix A.

If the equation is at the end of a sentence, then you should end the equation with a period. If the sentence in question continues beyond the equation, then you should end the equation with the appropriate punctuation - that is, a comma, semicolon, or no punctuation mark.

## 4.2 Displayed Lists

A displayed list is a list that is set off from the text, as opposed to a run-in list that is incorporated into the text. The bulleted list given below provides more information about the format of a displayed list.

- Use standard bullets instead of checks, arrows, etc. for bulleted lists.
- For numbered lists, the labels should not be Arabic numerals enclosed in parentheses because such labels cannot be distinguished from equation numbers.

The paragraph after the list is not indented.

1. Use standard numbering instead of special characters for numbered lists.
2. For numbered lists, the labels should not be Arabic numbers enclosed in parentheses because such labels cannot be distinguished from equation numbers.
3. You may need to restart the numbering on numbered lists.

## 4.3 Definitions and Theorems

Definitions, theorems, propositions, etc. should be formatted like a normal paragraph with a boldface heading as shown in the examples below. Number these items separately and sequentially. You may choose to separate number theorems, propositions, corollaries, etc., as opposed to the example below where corollaries and theorems are numbered together. Search the source of this document to see how these environments were defined. The key command is `\newtheorem`. Use a period after the definition, theorem, corollary, or proposition number.

**Definition 1.** *In colloquial New Zealand English, the term dopey mongrel is used to refer to someone who has exhibited less than stellar intelligence.*

**Theorem 1.** *If a proceedings editor from New Zealand accidentally deletes his draft of the author kit shortly after completing it, he would be considered to be a dopey mongrel.*

**Corollary 2.** *One of the proceedings editors is a dopey mongrel.*

The paragraph after the list is not indented.

#### 4.4 Figures and Tables

Figures and tables should be centered within the text and should not extend beyond the right and left margins of the paper. Figures and tables can make use of color since the SCS produces electronic proceedings. However, try to select colors that can be differentiated when printing in black and white in consideration of the vast majority of people using such printers. Figures and tables are numbered sequentially, but separately, using Arabic numerals. All tables and figures should be explicitly referenced in the text and they should not be placed before they are referenced.

Each table should appear in the document after the paragraph in which the table is first referenced. However, if the table is getting split across pages, it is okay to include it after a few paragraphs from its first reference. One-line table captions are centered, while multiline captions are left justified. The table captions appear *above* the table.

Captions can be written using normal sentences with full punctuation. All captions should end with a period. It is fine to have multiple-sentence captions that help to explain the table. See Tables 1 and 2 for examples, note that the captions are above the table.

Table 1: Table captions appear above the table, and if they are longer than one line they are left justified. Captions are written using normal sentences with full punctuation. It is fine to have multiple-sentence captions that help to explain the table.

Creature	IQ	Diet
dog	70	anything
cat	75	almost nothing
human	60	ice cream
dolphin	120	fish fillet

Table 2: Counting in Maori.

English	Maori
one	tahi
two	rua
three	toru
four	wha

Each figure should appear in the document after the paragraph in which the figure is first referenced. Figure captions appear below the figure. Single-line captions are centered, while multiline captions are left justified. Captions end with a period. See Figures 1 and 2 for examples.

Figure 3 shows an example of subfigures. We use the `subcaption` package to provide this feature. You can refer to the first subfigure with Figure 3a, and to the second one with Figure 3b.

References to tables and figures are given as Figure 1 or Table 1. For example, “We see in Table 2 that . . .” and “We see in Figure 2 . . .” are both correct. Be sure to use the `\label` command within the figure or table environment and refer to the associated figure or table using `\autoref{your label here}`.

Please do not use hard-coded figure/table numbers. This is error-prone, and the references will not be hyperlinks.

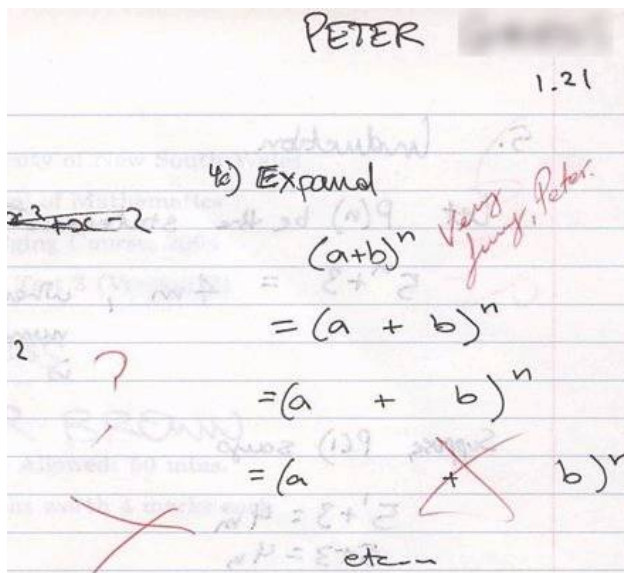


Figure 1: An unusual answer to a question.

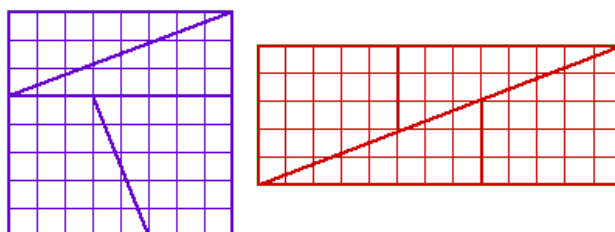


Figure 2: The area of the square is 64 squares, while that of the rectangle is 65 squares, yet they are made of the same pieces! How is this possible?

Please ensure that your graphics files use standard fonts (Times New Roman, Symbol, etc.) or that those are embedded in the final figure files. If they are not embedded, and if the font is not available on the editor's computer, then the font will not be included in the final PDF. This may lead to a problem with displaying the final PDF file on computers without an appropriate font. At best you select a format that allows embedding the fonts in all non-bitmap figure files.

Including graphics files in your document can be complicated. In general, you have 2 options. Either (a) you use .jpg, .png or .pdf files (.eps files can be also used, provided that the `epstopdf` package is added in the preamble) or (b) all of your files must be either .ps or .eps. Note that there are tools to convert these formats into one another. The main difference between the formats is how they store the images and how well-suited they are for specific graphics. You can choose between bitmap and vector graphics.

Bitmap graphics are well suited for photographs (.jpg is very common here) or for screenshots (.png is a lossless encoding in contrast to .jpg, and is thus better suited for all those cases where you have sharp edges in your graphics).

Vector graphics are the encoding to be chosen for all kinds of drawings (diagrams, charts, ...). In contrast to bitmap formats, they can be scaled to any size without any loss of sharpness. This makes it possible to read such graphics even if two pages are printed on one sheet of paper, or if the documents are read electronically.

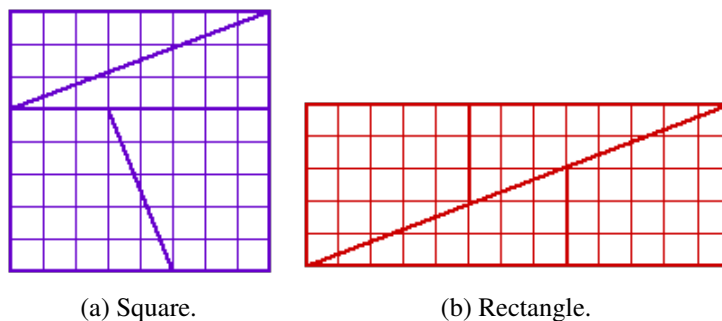


Figure 3: Example of a figure with subfigures.

So what to choose for your  $\LaTeX$  document? As a rule of thumb, you should always prefer `.pdf` or `.eps`. In general, these two formats can contain both, bitmap and vector graphics. But there is no need (and no use) to convert your bitmaps to either of these.

If you follow Option (a), then you must use the PDFLaTeX command to generate your PDF file, as was done with this file. PDFLaTeX is nowadays the standard - so option (a) should be a natural choice. The final file format is PDF.

If you follow Option (b), then you must use the outdated `latex - dvips - ps2pdf` route for generating a PDF file. You may run into a problem if using both the `hyperref` package and the `graphicx` package; there seems to be a clash there. In that case, you might either not use the `hyperref` package and continue to use `graphicx`, or continue to use the `hyperref` package and use the `epsfig` package in place of the `graphicx` package.

If you persevere with `hyperref` then be sure to use the appropriate version of the `\usepackage` command; see the preamble in the source of this file for details. See also Section 4.5 below. It is important to note that if you remove the `hyperref` package, then you have to deal with the correct formatting of hyperlinks on your own.

Whatever option you choose: if you include figures via `includegraphics`, then please do so without the file ending (e.g., `skip .pdf`, `.eps`, ...).

## 4.5 Hyperlinks

A *hyperlink* specifies a Web address (URL) or an e-mail address. The use of hyperlinks allows authors to give readers access to external electronic information, such as a dynamic simulation or animation. But please note: hyperlinks (to web pages) might not work forever (web pages might be removed), and thus using hyperlinks intensively may make a paper (or parts thereof) less useful in the future. If enough information is provided in the main body of the paper to enable searching for the cited content in any case and if the inclusion of the web address does not hurt the appearance of the paper, then the web address can be included in the main body of the paper itself.

**While the use of hyperlinked text is encouraged in the main body of the paper, it is recommended that corresponding web addresses and other identifying information should be provided in the list of references.** For example, instead of spelling out the web address of the conference website, one would refer to the conference website and the corresponding entry in the reference section will spell out the associated web address and other relevant information such as author(s) and/or organization that published the content. This would allow readers to search for the content using the author(s), organization, etc. in case the actual web address is changed. This also allows for a cleaner appearance of the main body of the paper.



Each hyperlink should be set in the same font as the text. Hyperlinks are *not* underlined. A live hyperlink (or hotlink) - that is, a hyperlink that will activate your Web browser and take it to an external Web site or that will activate your e-mail software for sending a message to a specific e-mail address - should be colored blue. You can see examples of such hyperlinks in this paper. The use of live hyperlinks is at the discretion of the author(s).

Non-live hyperlinks that is, the hyperlinks that are included for the reader's information but do not actually invoke the reader's Web browser or e-mail software should be colored black (use package `url` and `\url{http://...}`). To use live hyperlinks in a proceedings paper, use the `hyperref` package. If you are using PDFLaTeX to generate your PDF file then, as was done for this file, you should use the following as the last `\usepackage` command that is already in the preamble.

```
\usepackage[pdftex,colorlinks=true,urlcolor=blue,citecolor=black,anchorcolor=black,linkcolor=black]{hyperref}
```

On the other hand, if you are using the traditional `latex - dvips - ps2pdf` route, then users of MiKTeX or PCTeX for Windows should add the command

```
\usepackage[dvips,colorlinks=true,urlcolor=blue,citecolor=black,anchorcolor=black,linkcolor=black]{hyperref}
```

as the last `\usepackage` command in the preamble, while users of Y&Y TeX should add the command

```
\usepackage[dvipsone,colorlinks=true,urlcolor=blue,citecolor=black,anchorcolor=black,linkcolor=black]{hyperref}
```

as the last `\usepackage` command in the preamble.

In general, the `\usepackage` command above that works for MiKTeX running on a Windows system should also work for most implementations of L<sup>A</sup>T<sub>E</sub>X running on a UNIX or Apple system. Thus the hypertext link [conference website](http://www.scs.org) [1] to the conference website can be established by the command

```
\href{http://www.scs.org}{conference website}~\cite{SCS}
```

It is recommended to add all hypertext references to the `.bib` file and refer to them from the text as it is done in the example above.

If the authors use hyperlinked text in the main body of the paper, they must ensure that each hyperlink includes a citation following the hyperlinked text, a corresponding entry is provided in the list of references, and the associated web address displayed for the hyperlink is complete and correct so that a reader who has only a hard copy of the paper can still access the cited material by typing the relevant part of the displayed text of the hyperlink into the address bar of a Web browser. If the authors opt for including the web address in the main body of the text itself, they must ensure that the hyperlink is complete and correct for the same reason. Again, it is recommended that corresponding web addresses and email addresses should be provided in the references.

If you use the package `hyperref` as suggested here, and if you use citation commands to handle references, then your citations will become click-able hyperlinks (as in this document). The same happens to all the references to equations, figures, and tables. This can aid the reader in navigating the document.

## 5 USING BIB<sub>T</sub>E<sub>X</sub>

To cite a reference in the text, the [IEEEtran method](#) [2] is used. You can cite multiple works within the same brackets [2, 3, 4].

Using BIB<sub>T</sub>E<sub>X</sub> for referencing is the recommended way. Please, do **not** typeset references and citations manually. Indeed, the references in this document were generated using BIB<sub>T</sub>E<sub>X</sub>, so the source for this document serves as an example of how to use BIB<sub>T</sub>E<sub>X</sub> to meet the formatting requirements.

One benefit of using BIB<sub>T</sub>E<sub>X</sub> is that bibliography formatting and referencing can be greatly simplified: the correct citation and reference list style is automatically created. We assume that you already know how to use BIB<sub>T</sub>E<sub>X</sub>.

Software to manage BIB<sub>T</sub>E<sub>X</sub> files, for example, JabRef (Java based), can support you in managing and creating valid `bib` files. *Please open your bib file with software like JabRef BEFORE you submit your final version. Experience shows that almost all manually edited bib files contain duplicated bib keys (which means a random selection of references), broken entries which usually lead to missing bibliographic information, invalid keys, and last but not least invalid tokens in bib files. Bib files DO NOT support comments. BIB<sub>T</sub>E<sub>X</sub> should not report any error for your final submitted document.*

The BIB<sub>T</sub>E<sub>X</sub> input file `scsproc.bst` and the L<sup>A</sup>T<sub>E</sub>X macros found in `scsprocbib.tex` are provided, so no other files (apart from your bibliography) are required. The macros in these files have been tested with L<sup>A</sup>T<sub>E</sub>X. The simplest way to write a paper that uses BIB<sub>T</sub>E<sub>X</sub> is to take the source file for this document and modify it to generate your article.

### 5.1 Set Up the BIB<sub>T</sub>E<sub>X</sub> Input Files

BIB<sub>T</sub>E<sub>X</sub> requires a bibliography style file (extension `.bst`) and a bibliography database file (extension `.bib`). This is achieved using

```
\bibliographystyle{assets/scsproc}
\bibliography{demobib}
```

just before the AUTHOR BIOGRAPHY section. The file `demobib` in the `\bibliography` command should be replaced with the base names of your BIB<sub>T</sub>E<sub>X</sub> `.bib` files that you use for your bibliography. BIB<sub>T</sub>E<sub>X</sub> is then run as usual to create a bibliography file (`.bbl`).

### 5.2 Use the Citation Macros

Use `\cite` to cite references in the L<sup>A</sup>T<sub>E</sub>X source document. For example,

```
\cite{law:simulationc,cheng:queuehetero}
```

results in the citation [5, 6].

### 5.3 Generate the Bibliography File

Run PDF<sub>L</sub>A<sub>T</sub>E<sub>X</sub> (or L<sup>A</sup>T<sub>E</sub>X), then BIB<sub>T</sub>E<sub>X</sub>, and then PDF<sub>L</sub>A<sub>T</sub>E<sub>X</sub> two more times. Running PDF<sub>L</sub>A<sub>T</sub>E<sub>X</sub> the first time creates the `.aux` file. Running BIB<sub>T</sub>E<sub>X</sub> creates the `.bbl` file. Running PDF<sub>L</sub>A<sub>T</sub>E<sub>X</sub> again (twice) fixes the bibliography and citation references.

## 5.4 Include the Bibliography File in Your Submission

Be sure to include your `.bib` file(s) or your `.bbl` file as part of your submission. If you only include the `.bbl` file, then please verify that you include the most up-to-date version reflecting changes during the editing process by rerunning `BIBTEX` one last time before submission.

Please be aware that submitting the `.bbl` file instead of the `.bib` file means extra work for the editing team and for you, as any changes to the reference list need to be done by you in this case. Please open and save the file before every submission with software like JabRef to see whether the file is correct and to check for duplicated entries and/or bib keys in the file.

## 6 AUTHOR CHECKLIST

We strive for a consistent appearance in all papers published in the proceedings. If you used the template and styles within this author's kit, then almost all of the requirements in this checklist will be automatically satisfied, and there is very little to check.

Please **print a hardcopy of your paper**, and go over your printed paper to make sure it adheres to the following requirements. *Thank you!*

1. Abstract
  - (a) 150 or fewer words.
  - (b) Provide 3-5 keywords (mandatory). This set of keywords will identify your paper in indices and databases.
2. Paper Length
  - (a) At least 5, but no more than 12 pages.
  - (b) Page size is letter size (8.5" x 11", or 216 mm x 279 mm).
3. All text is in 11-Point Times New Roman except the title, header, and footer (default in this template).
4. Paper title is in 12-Point Times New Roman **BOLDFACE ALL CAPS** (default in this template).
5. The paper has been spellchecked using U.S. English.
6. Spacing and Margins
  - (a) Single spaced.
  - (b) Left and right margins are each 1 inch (default in this template).
  - (c) Top and bottom margins are according to the template.
  - (d) Title starts 1.25 inches from the top of the page (default in this template).
7. Section Headings
  - (a) Left justified and set in **BOLDFACE ALL CAPS** (default in this template).
  - (b) Numbered, except for the abstract, acknowledgments, references, and author biographies.
  - (c) Subsection headings are set in **Boldface Headline Style** (default in this template).
8. No footnotes or page numbers.
9. Multiple authors are formatted correctly.
10. Equations are centered and any equation numbers are in parentheses and right-justified (default).
11. Figures and Tables
  - (a) All text in figures and tables is readable.
  - (b) Table captions appear above the table.
  - (c) Figure captions appear below the figure.
12. Citations and References
  - (a) Citations are by numbers between brackets (default `BIBTEX`).

- (b) References are in the hangref style and are listed in the order they are cited in the text (also default L<sup>A</sup>T<sub>E</sub>X setting in this template).
- 13. Author biographies are one paragraph per author.
- 14. Hyperlinks
  - (a) Be sure that hyperlinks will probably work in the future as well.
  - (b) Live hyperlinks are blue. Nonlive hyperlinks are black (default in this template).
- 15. All fonts must be embedded in the resulting .pdf. If you use pdf<sub>l</sub>atex, this should already be true—unless you included figures in the .eps or .pdf format which may introduce additional font dependencies. You can use the pdf<sub>f</sub>onts command to see if all the fonts are embedded (the column “emb” should say yes for all rows). You can use GhostScript to force embed the fonts, like so: `gs -dNOPAUSE -dBATCH -sDEVICE=pdfwrite -dEmbedAllFonts=true -sOutputFile=out.pdf -f in.pdf` (in Windows, use `gswin32` or `gswin32c` to invoke GhostScript).

After verifying that your paper meets these requirements, please go to the final submission page at the conference website and submit your paper. Be sure to complete the transfer of copyright form and upload the .pdf receipt. *Thank you for contributing to the SCS conferences!*

## ACKNOWLEDGMENTS

Place the acknowledgments section, if needed, after the main text, but before any appendices and references. The section heading is not numbered. These instructions are adapted from the version by Roeder, T. M. K., Frazier, P. I., Wotton, H., Szechtman, R., Yooh, H. L., Harker, J., and Zhou, E. Those instructions were adapted from WSC instructions with permission from WSC BoD [7] that have been iteratively updated and improved by proceedings editors and several other individuals, who are too numerous to name separately since the first set of instructions were written by Barry Nelson for the 1991 WSC.

## A APPENDICES

Place any appendices after the acknowledgments. Note that the default style labels them A, B, C, and so forth (please, do not change this). The solution to (1) has the form:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \text{ if } a \neq 0. \quad (2)$$

## B GETTING HELP

If you need help in preparing your paper, contact the proceedings editors. You can reach the entire team by writing to our unified point of contact at [scs@scs.org](mailto:scs@scs.org).

## C MOST OBSERVED MISTAKES

The following list comprises **the most common sources of error** that had to be corrected by previous editors. Please make sure to go through the following list and check that your paper is formatted correctly:

1. The paper is less than 5 or more than 12 pages long.
2. Paper title and section titles are in **BOLD ALL CAPS**, subsections are **Bold and Capitalize the First Letter of Important Words**. Please use the templates.

3. Paper is in A4 format, not letter format. Please use the required margins.
4. The copyright notice is incorrect.
5. The running heads are incorrect. Do not forget that the LastNameLastAuthor is preceded by “, and”.
6. The citation format is incorrect. Use BIB<sub>T</sub>E<sub>X</sub> for citations and do not change the format used by the template.
7. The biographies are missing. Do not forget the “author biographies” section.
8. Figures or tables are not referenced in the text or have the incorrect caption format.
9. In the heading on the title page, country names are in all capitals.
10. Paragraphs are not indented.
11. Some fonts in the resulting .pdf are not embedded.

## REFERENCES

- [1] SCS, “Society for modeling & simulation international,” <http://www.scs.org>, 2016, accessed Aug. 08, 2016.
- [2] Paperpile LLC, “BibTeX bibliography style: IEEEtran,” <https://www.bibtex.com/s/bibliography-style-ieee-tran-ieee-tran/>, 2022, accessed June 18, 2023.
- [3] C. Chien, “Small sample theory for steady state confidence intervals,” Department of Operations Research, Stanford University, Stanford, California, Tech. Rep. No. 37, 1989.
- [4] J. Banks, J. S. Carson, B. L. Nelson, and D. M. Nicol, *Discrete-Event System Simulation*, 3rd ed. Upper Saddle River, New Jersey: Prentice-Hall, Inc., 2000.
- [5] A. M. Law and W. D. Kelton, *Simulation Modeling & Analysis*, 3rd ed. New York: McGraw-Hill, Inc, 2000.
- [6] R. C. H. Cheng and J. P. C. Kleijnen, “Improved design of queueing simulation experiments with highly heteroscedastic responses,” *Operations Research*, vol. 47, no. 3, pp. 762–777, 1999.
- [7] WSC BoD, “Winter simulation conference,” <http://www.wintersim.org>, 2016, accessed Jan. 10, 2016.

## AUTHOR BIOGRAPHIES

A biography is mandatory for each author. A biography starts with an author’s name, then provides their position and a brief summary of their research interests. The biography ends with the email. The biography is not intended to be a comprehensive summary of accomplishments. **Note that initial submissions are double blind, so biographies must not be included when submitting your manuscript.** Leave space for biographies so that you can include them when submitting the camera-ready version of your paper, after acceptance.

**ROMAN CARDENAS** is a Teaching Assistant in the Department of Electronic Systems at Universidad Politécnica de Madrid (UPM), Spain, where he is pursuing a Ph.D. in Electronic Systems Engineering in Cotutelle with Carleton University (CU). His research interests include modeling and simulation with applications in the IoT domain. His email address is [r.cardenas@upm.es](mailto:r.cardenas@upm.es).

**BENTLEY JAMES OAKES** is an Assistant Professor in the Department of Computer Engineering and Software Engineering at Polytechnique Montréal, Canada. Previously, he was a post-doctoral researcher at the University of Montréal, Canada and at the University of Antwerp, Belgium. He received his PhD at McGill University. His research interests include digital twins, knowledge representation, cyber-physical system verification, model-driven engineering, and model transformations. His email address is [bentley.oakes@polymtl.ca](mailto:bentley.oakes@polymtl.ca).