

Title goes here, only the first word is capitalized

First Author

Department, Some Institute, Some street address, city, state/province, country/postal-code

Second Author, Third Author, and Fourth Author

Department, Some other Institute, Some street address, city, state/province, country/postal-code

This template is designed to provide authors of Physics Education Research Conference (PERC) Proceedings papers with the basis for their submission. The format for the 2019 Proceedings follows the PRPER style. There are additional comments in the source code specific to the $\text{\LaTeX}$ version of the template.

I. INTRODUCTION

The introduction should clearly explain the nature and scope of the research as well as provide the reader with a roadmap of the rest of the paper.

PERC proceedings submissions are limited to 4 pages. However, the title page does not count against that amount. Furthermore, the references do not count against that limit either.

Times New Roman 10 point font is used throughout the paper with single line spacing and the text is fully justified. Paragraph style: indent first line three spaces (0.19"); there is no extra line spacing between paragraphs. This is the standard font and layout for the individual paragraphs.

The paper size is 8.5×11 inches. Margins are 1" top and bottom, 0.75" left and right. Each column is 3.35" with 0.3" spacing between them.

Please do not adjust the spacing of the headers. They should have a 12pt space before and a 6pt space after each heading. (Note: $\LaTeX$ sets the white space itself, and sometimes pads section headers. This is most likely to happen in documents that are underfilled with text—like this template—and most of those problems resolve themselves as the paper reaches a normal length.)

Information about the style of paper and answers to other submission questions can be found on the PER-Central website [1].

A. Lists of all types

You can certainly utilize lists of all types. You can use the standard $\LaTeX$ environments for creating unordered lists

- Thing
- Thing
- Thing

ordered lists

1. Who
2. What
3. I don't know

or even descriptions

Costello: Well then who's on first?

Abbott: Yes.

Costello: I mean the fellow's name.

Abbott: Who.

Costello: The guy on first.

If you wish to condense the spacing between the items, you can use the `enumitem` package and include the option `nosep`.

II. TABLES AND FIGURES

Figures, tables, and equations must be inserted in the text and may not be grouped at the end of the paper. Important: miscounting of figures, tables, or equations may result from



FIG. 1. Figure captions appear below the figure while table captions appear above the table.

revisions. Please double check the numbering of these elements before you submit your paper to the volume editor.

A. Figures

If your manuscript contains figures, they are typically placed in one column (see Fig. 1). A large figure might span two columns (see Fig. 2). Cite all figures in the text consecutively. The word "Figure" should be spelled out if it is the first word of the sentence and abbreviated as "Fig." elsewhere in the text. Place the figures as close as possible to their first mention in the text at the top or bottom of the page.

1. Color figures

Color figures are allowed since the PERC Proceedings is available only in an online format. However, authors are encouraged to check that the figures print in black and white without loss of clarity.

B. Tables

Give each table a concise title and define any abbreviations in footnotes to the table. Place tables at the top or bottom of the page, close to where they are first cited (like Table I). Center the table in the width of the text area, and center the caption as well.

Tables should not break across the page or column, but rather should be together cohesively. In some cases, that may mean that a small amount of white space appears near the bottom of a column.

TABLE I. This is a sample table.

	MS Word
	US Letter Size Paper
Primary Heading	Roman numerals, all capital letters
First subheading	Capital letters, only first letter of first word capitalized
Second subheading	Numbers, italicized



FIG. 2. A 2-column figure. Center figure captions if they run one line only, and justify captions if they are multi-line.

III. OTHER ISSUES

A. Copyright transfer

All accepted papers will be made available under a Creative Commons Attribution 4.0 License (CC-BY).

B. Citations

When you are preparing references, please use the *Phys. Rev. PER* Style Guide [2]. This document contains information about how references should be formatted, including proper journal abbreviations. Examples directly from that style guide of a journal, book, proceedings paper, and dissertation are also provided here [3, 4]. Note: These references are *fake*. In your paper, you should hyperlink to your citations as is expected by *Phys. Rev. PER*. We do not link to non-existent papers in this template. L^AT_EX users, BibT_EX is your friend.

Note that for the first time in 2019, we allow references to go beyond the fourth page. As we no longer constrain the length of the references, you should include titles in your citations as you typically would in *Phys. Rev. PER*.

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- <http://www.nature.com>
- <http://www.sciencemag.org>

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IV. CONCLUSIONS

This template was newly updated for the 2019 PERC Proceedings. The editors apologize if any errors exist, and encourage you to contact them with changes and other suggestions.

ACKNOWLEDGMENTS

Put references below the acknowledgements (and appendixes, if any).

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- [1] <http://www.per-central.org/perc/AuthorSubmission.cfm>, retrieved 6/20/2015.
- [2] <http://journals.aps.org/files/styleguide-pr.pdf>, retrieved 5/5/2015.
- [3] G. DeBoer and S. Otherperson, *A History of Ideas in Science Education: Implications for Practice* (Teachers College Press,

- 1991).
- [4] E. A. West, C. A. Paul, D. Webb, and W. H. Potter, Variation of instructor-student interactions in an introductory interactive physics course, *Phys. Rev. ST Phys. Educ. Res.* **9**, 010109 (2013).