Formatting Instructions For NeurIPS 2020

Anonymous Author(s)

Affiliation Address email

Abstract

The abstract paragraph should be indented ½ inch (3 picas) on both the left- and right-hand margins. Use 10 point type, with a vertical spacing (leading) of 11 points.

The word **Abstract** must be centered, bold, and in point size 12. Two line spaces precede the abstract. The abstract must be limited to one paragraph.

5 1 Submission of papers to NeurIPS 2020

- 6 NeurIPS requires electronic submissions. The electronic submission site is
- 7 https://cmt3.research.microsoft.com/NeurIPS2020/
- 8 Please read the instructions below carefully and follow them faithfully.

9 1.1 Style

- Papers to be submitted to NeurIPS 2020 must be prepared according to the instructions presented
- here. Papers may only be up to eight pages long, including figures. Additional pages containing only
- 12 a section on the broader impact, acknowledgments and/or cited references are allowed. Papers that
- 13 exceed eight pages of content will not be reviewed, or in any other way considered for presentation at
- 14 the conference.
- 15 The margins in 2020 are the same as those in 2007, which allow for $\sim 15\%$ more words in the paper
- 16 compared to earlier years.
- Authors are required to use the NeurIPS LATEX style files obtainable at the NeurIPS website as
- 18 indicated below. Please make sure you use the current files and not previous versions. Tweaking the
- 19 style files may be grounds for rejection.

20 1.2 Retrieval of style files

- 21 The style files for NeurIPS and other conference information are available on the World Wide Web at
- 22 http://www.neurips.cc/
- The file neurips_2020.pdf contains these instructions and illustrates the various formatting re-
- 24 quirements your NeurIPS paper must satisfy.
- 25 The only supported style file for NeurIPS 2020 is neurips_2020.sty, rewritten for L^ΔT_FX 2_ε.
- 26 Previous style files for LATEX 2.09, Microsoft Word, and RTF are no longer supported!

- 27 The LATEX style file contains three optional arguments: final, which creates a camera-ready copy,
- 28 preprint, which creates a preprint for submission to, e.g., arXiv, and nonatbib, which will not
- load the natbib package for you in case of package clash.
- 30 **Preprint option** If you wish to post a preprint of your work online, e.g., on arXiv, using the
- 31 NeurIPS style, please use the preprint option. This will create a nonanonymized version of your
- work with the text "Preprint. Work in progress." in the footer. This version may be distributed as
- 33 you see fit. Please do not use the final option, which should only be used for papers accepted to
- 34 NeurIPS.
- 35 At submission time, please omit the final and preprint options. This will anonymize your
- 36 submission and add line numbers to aid review. Please do not refer to these line numbers in your
- paper as they will be removed during generation of camera-ready copies.
- The file neurips_2020.tex may be used as a "shell" for writing your paper. All you have to do is
- replace the author, title, abstract, and text of the paper with your own.
- 40 The formatting instructions contained in these style files are summarized in Sections 2, 3, and 4
- 41 below.

42 **General formatting instructions**

- The text must be confined within a rectangle 5.5 inches (33 picas) wide and 9 inches (54 picas) long.
- The left margin is 1.5 inch (9 picas). Use 10 point type with a vertical spacing (leading) of 11 points.
- 45 Times New Roman is the preferred typeface throughout, and will be selected for you by default.
- Paragraphs are separated by ½ line space (5.5 points), with no indentation.
- 47 The paper title should be 17 point, initial caps/lower case, bold, centered between two horizontal
- rules. The top rule should be 4 points thick and the bottom rule should be 1 point thick. Allow 1/4 inch
- space above and below the title to rules. All pages should start at 1 inch (6 picas) from the top of the
- 50 page.
- 51 For the final version, authors' names are set in boldface, and each name is centered above the
- 52 corresponding address. The lead author's name is to be listed first (left-most), and the co-authors'
- names (if different address) are set to follow. If there is only one co-author, list both author and
- 54 co-author side by side.
- 55 Please pay special attention to the instructions in Section 4 regarding figures, tables, acknowledgments,
- 56 and references.

57 3 Headings: first level

- 58 All headings should be lower case (except for first word and proper nouns), flush left, and bold.
- 59 First-level headings should be in 12-point type.

60 3.1 Headings: second level

61 Second-level headings should be in 10-point type.

62 3.1.1 Headings: third level

- 63 Third-level headings should be in 10-point type.
- 64 **Paragraphs** There is also a \paragraph command available, which sets the heading in bold, flush
- left, and inline with the text, with the heading followed by 1 em of space.

66 4 Citations, figures, tables, references

67 These instructions apply to everyone.

4.1 Citations within the text

- 69 The natbib package will be loaded for you by default. Citations may be author/year or numeric, as
- 70 long as you maintain internal consistency. As to the format of the references themselves, any style is
- 71 acceptable as long as it is used consistently.
- 72 The documentation for natbib may be found at
- http://mirrors.ctan.org/macros/latex/contrib/natbib/natnotes.pdf
- Of note is the command \citet, which produces citations appropriate for use in inline text. For example,
- 76 \citet{hasselmo} investigated\dots
- 77 produces
- Hasselmo, et al. (1995) investigated...
- If you wish to load the natbib package with options, you may add the following before loading the neurips_2020 package:
- 81 \PassOptionsToPackage{options}{natbib}
- If natbib clashes with another package you load, you can add the optional argument nonatbib when loading the style file:
- 84 \usepackage[nonatbib] {neurips_2020}
- 85 As submission is double blind, refer to your own published work in the third person. That is, use "In
- the previous work of Jones et al. [4]," not "In our previous work [4]." If you cite your other papers
- that are not widely available (e.g., a journal paper under review), use anonymous author names in the
- 88 citation, e.g., an author of the form "A. Anonymous."

89 4.2 Footnotes

- 90 Footnotes should be used sparingly. If you do require a footnote, indicate footnotes with a number 1
- 91 in the text. Place the footnotes at the bottom of the page on which they appear. Precede the footnote
- with a horizontal rule of 2 inches (12 picas).
- Note that footnotes are properly typeset *after* punctuation marks.²

4.3 Figures

- 95 All artwork must be neat, clean, and legible. Lines should be dark enough for purposes of reproduction.
- 96 The figure number and caption always appear after the figure. Place one line space before the figure
- 97 caption and one line space after the figure. The figure caption should be lower case (except for first
- 98 word and proper nouns); figures are numbered consecutively.
- You may use color figures. However, it is best for the figure captions and the paper body to be legible if the paper is printed in either black/white or in color.

¹Sample of the first footnote.

²As in this example.

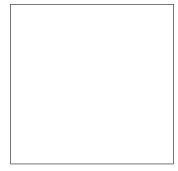


Figure 1: Sample figure caption.

Table 1: Sample table title

	Part	
Name	Description	Size (μm)
Dendrite Axon Soma	Input terminal Output terminal Cell body	~ 100 ~ 10 up to 10^6

4.4 Tables

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- All tables must be centered, neat, clean and legible. The table number and title always appear before the table. See Table 1.
- Place one line space before the table title, one line space after the table title, and one line space after
- the table. The table title must be lower case (except for first word and proper nouns); tables are
- 106 numbered consecutively.
- Note that publication-quality tables do not contain vertical rules. We strongly suggest the use of the
- booktabs package, which allows for typesetting high-quality, professional tables:

https://www.ctan.org/pkg/booktabs

110 This package was used to typeset Table 1.

5 Final instructions

- 112 Do not change any aspects of the formatting parameters in the style files. In particular, do not modify
- the width or length of the rectangle the text should fit into, and do not change font sizes (except
- perhaps in the **References** section; see below). Please note that pages should be numbered.

115 6 Preparing PDF files

- Please prepare submission files with paper size "US Letter," and not, for example, "A4."
- Fonts were the main cause of problems in the past years. Your PDF file must only contain Type 1 or Embedded TrueType fonts. Here are a few instructions to achieve this.
 - You should directly generate PDF files using pdflatex.
 - You can check which fonts a PDF files uses. In Acrobat Reader, select the menu Files>Document Properties>Fonts and select Show All Fonts. You can also use the program pdffonts which comes with xpdf and is available out-of-the-box on most Linux machines.

- The IEEE has recommendations for generating PDF files whose fonts are also acceptable for NeurIPS. Please see http://www.emfield.org/icuwb2010/downloads/ IEEE-PDF-SpecV32.pdf
 - xfig "patterned" shapes are implemented with bitmap fonts. Use "solid" shapes instead.
 - The \bbold package almost always uses bitmap fonts. You should use the equivalent AMS Fonts:

\usepackage{amsfonts}

followed by, e.g., \mathbb{R} , \mathbb{R} , \mathbb{N} or \mathbb{C} . You can also use the following workaround for reals, natural and complex:

```
132 \newcommand{\RR}{I\!\!R} %real numbers

133 \newcommand{\Nat}{I\!\!N} %natural numbers

134 \newcommand{\CC}{I\!\!\!\!C} %complex numbers
```

Note that amsfonts is automatically loaded by the amssymb package.

136 If your file contains type 3 fonts or non embedded TrueType fonts, we will ask you to fix it.

137 6.1 Margins in LATEX

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- 138 Most of the margin problems come from figures positioned by hand using \special or other
- 139 commands. We suggest using the command \includegraphics from the graphicx package.
- 140 Always specify the figure width as a multiple of the line width as in the example below:

```
\usepackage[pdftex]{graphicx} ...
\includegraphics[width=0.8\linewidth]{myfile.pdf}
```

- 143 See Section 4.4 in the graphics bundle documentation (http://mirrors.ctan.org/macros/
- 144 latex/required/graphics/grfguide.pdf)
- A number of width problems arise when LATEX cannot properly hyphenate a line. Please give LaTeX
- 146 hyphenation hints using the \- command when necessary.

147 **Broader Impact**

- ¹⁴⁸ Authors are required to include a statement of the broader impact of their work, including its ethical
- aspects and future societal consequences. Authors should discuss both positive and negative outcomes,
- if any. For instance, authors should discuss a) who may benefit from this research, b) who may be
- put at disadvantage from this research, c) what are the consequences of failure of the system, and d)
- whether the task/method leverages biases in the data. If authors believe this is not applicable to them,
- authors can simply state this.
- 154 Use unnumbered first level headings for this section, which should go at the end of the paper. Note
- that this section does not count towards the eight pages of content that are allowed.

156 References

- 157 References follow the acknowledgments. Use unnumbered first-level heading for the references. Any
- choice of citation style is acceptable as long as you are consistent. It is permissible to reduce the font
- size to small (9 point) when listing the references. Note that the Reference section does not count
- towards the eight pages of content that are allowed.
- 161 [1] Alexander, J.A. & Mozer, M.C. (1995) Template-based algorithms for connectionist rule extraction. In
- 162 G. Tesauro, D.S. Touretzky and T.K. Leen (eds.), Advances in Neural Information Processing Systems 7, pp.
- 163 609–616. Cambridge, MA: MIT Press.

- 164 [2] Bower, J.M. & Beeman, D. (1995) *The Book of GENESIS: Exploring Realistic Neural Models with the* 165 *GEneral NEural SImulation System.* New York: TELOS/Springer–Verlag.
- 166 [3] Hasselmo, M.E., Schnell, E. & Barkai, E. (1995) Dynamics of learning and recall at excitatory recurrent 167 synapses and cholinergic modulation in rat hippocampal region CA3. *Journal of Neuroscience* **15**(7):5249-5262.