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# Formatting Instructions For NeurIPS 2022

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Affiliation

Address

email

## Abstract

1 The abstract paragraph should be indented  $\frac{1}{2}$  inch (3 picas) on both the left-  
2 and right-hand margins. Use 10 point type, with a vertical spacing (leading) of  
3 11 points. The word **Abstract** must be centered, bold, and in point size 12. Two  
4 line spaces precede the abstract. The abstract must be limited to one paragraph.

## 5 1 Submission of papers to NeurIPS 2022

6 Please read the instructions below carefully and follow them faithfully.

### 7 1.1 Style

8 Papers to be submitted to NeurIPS 2022 must be prepared according to the instructions presented  
9 here. Papers may only be up to **nine** pages long, including figures. Additional pages *containing*  
10 *only acknowledgments and references* are allowed. Papers that exceed the page limit will not be  
11 reviewed, or in any other way considered for presentation at the conference.

12 The margins in 2022 are the same as those in 2007, which allow for  $\sim 15\%$  more words in the paper  
13 compared to earlier years.

14 Authors are required to use the NeurIPS L<sup>A</sup>T<sub>E</sub>X style files obtainable at the NeurIPS website as  
15 indicated below. Please make sure you use the current files and not previous versions. Tweaking the  
16 style files may be grounds for rejection.

### 17 1.2 Retrieval of style files

18 The style files for NeurIPS and other conference information are available on the World Wide Web  
19 at

20 <http://www.neurips.cc/>

21 The file `neurips_2022.pdf` contains these instructions and illustrates the various formatting re-  
22 quirements your NeurIPS paper must satisfy.

23 The only supported style file for NeurIPS 2022 is `neurips_2022.sty`, rewritten for L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>. **Pre-**  
24 **vious style files for L<sup>A</sup>T<sub>E</sub>X 2.09, Microsoft Word, and RTF are no longer supported!**

25 The L<sup>A</sup>T<sub>E</sub>X style file contains three optional arguments: `final`, which creates a camera-ready copy,  
26 `preprint`, which creates a preprint for submission to, e.g., arXiv, and `nonatbib`, which will not  
27 load the `natbib` package for you in case of package clash.

28 **Preprint option** If you wish to post a preprint of your work online, e.g., on arXiv, using the  
29 NeurIPS style, please use the `preprint` option. This will create a nonanonymized version of your  
30 work with the text “Preprint. Work in progress.” in the footer. This version may be distributed as

31 you see fit. Please **do not** use the `final` option, which should **only** be used for papers accepted to  
32 NeurIPS.

33 At submission time, please omit the `final` and `preprint` options. This will anonymize your sub-  
34 mission and add line numbers to aid review. Please do *not* refer to these line numbers in your paper  
35 as they will be removed during generation of camera-ready copies.

36 The file `neurips_2022.tex` may be used as a “shell” for writing your paper. All you have to do is  
37 replace the author, title, abstract, and text of the paper with your own.

38 The formatting instructions contained in these style files are summarized in Sections 2, 3, and 4  
39 below.

## 40 **2 General formatting instructions**

41 The text must be confined within a rectangle 5.5 inches (33 picas) wide and 9 inches (54 picas) long.  
42 The left margin is 1.5 inch (9 picas). Use 10 point type with a vertical spacing (leading) of 11 points.  
43 Times New Roman is the preferred typeface throughout, and will be selected for you by default.  
44 Paragraphs are separated by  $\frac{1}{2}$  line space (5.5 points), with no indentation.

45 The paper title should be 17 point, initial caps/lower case, bold, centered between two horizontal  
46 rules. The top rule should be 4 points thick and the bottom rule should be 1 point thick. Allow  
47  $\frac{1}{4}$  inch space above and below the title to rules. All pages should start at 1 inch (6 picas) from the  
48 top of the page.

49 For the final version, authors’ names are set in boldface, and each name is centered above the corre-  
50 sponding address. The lead author’s name is to be listed first (left-most), and the co-authors’ names  
51 (if different address) are set to follow. If there is only one co-author, list both author and co-author  
52 side by side.

53 Please pay special attention to the instructions in Section 4 regarding figures, tables, acknowledg-  
54 ments, and references.

## 55 **3 Headings: first level**

56 All headings should be lower case (except for first word and proper nouns), flush left, and bold.

57 First-level headings should be in 12-point type.

### 58 **3.1 Headings: second level**

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

#### 60 **3.1.1 Headings: third level**

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

62 **Paragraphs** There is also a `\paragraph` command available, which sets the heading in bold, flush  
63 left, and inline with the text, with the heading followed by 1 em of space.

## 64 **4 Citations, figures, tables, references**

65 These instructions apply to everyone.

### 66 **4.1 Citations within the text**

67 The `natbib` package will be loaded for you by default. Citations may be author/year or numeric, as  
68 long as you maintain internal consistency. As to the format of the references themselves, any style  
69 is acceptable as long as it is used consistently.

70 The documentation for `natbib` may be found at

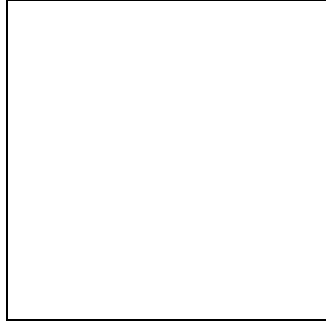


Figure 1: Sample figure caption.

71 `http://mirrors.ctan.org/macros/latex/contrib/natbib/natnotes.pdf`

72 Of note is the command `\citet`, which produces citations appropriate for use in inline text. For  
73 example,

74 `\citet{hasselmo}` investigated\dotso

75 produces

76 Hasselmo, et al. (1995) investigated...

77 If you wish to load the `natbib` package with options, you may add the following before loading the  
78 `neurips_2022` package:

79 `\PassOptionsToPackage{options}{natbib}`

80 If `natbib` clashes with another package you load, you can add the optional argument `nonatbib`  
81 when loading the style file:

82 `\usepackage[nonatbib]{neurips_2022}`

83 As submission is double blind, refer to your own published work in the third person. That is, use “In  
84 the previous work of Jones et al. [4],” not “In our previous work [4].” If you cite your other papers  
85 that are not widely available (e.g., a journal paper under review), use anonymous author names in  
86 the citation, e.g., an author of the form “A. Anonymous.”

## 87 4.2 Footnotes

88 Footnotes should be used sparingly. If you do require a footnote, indicate footnotes with a number<sup>1</sup>  
89 in the text. Place the footnotes at the bottom of the page on which they appear. Precede the footnote  
90 with a horizontal rule of 2 inches (12 picas).

91 Note that footnotes are properly typeset *after* punctuation marks.<sup>2</sup>

## 92 4.3 Figures

93 All artwork must be neat, clean, and legible. Lines should be dark enough for purposes of reproduc-  
94 tion. The figure number and caption always appear after the figure. Place one line space before the  
95 figure caption and one line space after the figure. The figure caption should be lower case (except  
96 for first word and proper nouns); figures are numbered consecutively.

97 You may use color figures. However, it is best for the figure captions and the paper body to be legible  
98 if the paper is printed in either black/white or in color.

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<sup>1</sup>Sample of the first footnote.

<sup>2</sup>As in this example.

Table 1: Sample table title

Part		
Name	Description	Size ( $\mu\text{m}$ )
Dendrite	Input terminal	$\sim 100$
Axon	Output terminal	$\sim 10$
Soma	Cell body	up to $10^6$

## 99 4.4 Tables

100 All tables must be centered, neat, clean and legible. The table number and title always appear before  
101 the table. See Table 1.

102 Place one line space before the table title, one line space after the table title, and one line space after  
103 the table. The table title must be lower case (except for first word and proper nouns); tables are  
104 numbered consecutively.

105 Note that publication-quality tables *do not contain vertical rules*. We strongly suggest the use of the  
106 booktabs package, which allows for typesetting high-quality, professional tables:

107 <https://www.ctan.org/pkg/booktabs>

108 This package was used to typeset Table 1.

## 109 5 Final instructions

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

## 113 6 Preparing PDF files

114 Please prepare submission files with paper size “US Letter,” and not, for example, “A4.”

115 Fonts were the main cause of problems in the past years. Your PDF file must only contain Type 1 or  
116 Embedded TrueType fonts. Here are a few instructions to achieve this.

- 117 • You should directly generate PDF files using `pdflatex`.
- 118 • You can check which fonts a PDF files uses. In Acrobat Reader, select the menu  
119 Files>Document Properties>Fonts and select Show All Fonts. You can also use the pro-  
120 gram `pdf fonts` which comes with `xpdf` and is available out-of-the-box on most Linux  
121 machines.
- 122 • The IEEE has recommendations for generating PDF files  
123 whose fonts are also acceptable for NeurIPS. Please see  
124 <http://www.emfield.org/icuwb2010/downloads/IEEE-PDF-SpecV32.pdf>
- 125 • `xfig` “patterned” shapes are implemented with bitmap fonts. Use “solid” shapes instead.
- 126 • The `\bbold` package almost always uses bitmap fonts. You should use the equivalent AMS  
127 Fonts:

128 `\usepackage{amsfonts}`

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

```
131 \newcommand{\RR}{\mathbb{R}} %real numbers
132 \newcommand{\Nat}{\mathbb{N}} %natural numbers
133 \newcommand{\CC}{\mathbb{C}} %complex numbers
```

134 Note that `amsfonts` is automatically loaded by the `amssymb` package.

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

## 136 6.1 Margins in L<sup>A</sup>T<sub>E</sub>X

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

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

142 See Section 4.4 in the graphics bundle documentation (<http://mirrors.ctan.org/macros/latex/required/graphics/>)

143 A number of width problems arise when L<sup>A</sup>T<sub>E</sub>X cannot properly hyphenate a line. Please give LaTeX  
144 hyphenation hints using the `\-` command when necessary.

## 145 References

146 References follow the acknowledgments. Use unnumbered first-level heading for the references.  
147 Any choice of citation style is acceptable as long as you are consistent. It is permissible to reduce  
148 the font size to `small` (9 point) when listing the references. Note that the Reference section does  
149 not count towards the page limit.

150 [1] Alexander, J.A. & Mozer, M.C. (1995) Template-based algorithms for connectionist rule extraction. In  
151 G. Tesauro, D.S. Touretzky and T.K. Leen (eds.), *Advances in Neural Information Processing Systems 7*, pp.  
152 609–616. Cambridge, MA: MIT Press.

153 [2] Bower, J.M. & Beeman, D. (1995) *The Book of GENESIS: Exploring Realistic Neural Models with the*  
154 *GEneral NEural Simulation System*. New York: TELOS/Springer-Verlag.

155 [3] Hasselmo, M.E., Schnell, E. & Barkai, E. (1995) Dynamics of learning and recall at excitatory recurrent  
156 synapses and cholinergic modulation in rat hippocampal region CA3. *Journal of Neuroscience* **15**(7):5249-  
157 5262.

## 158 Checklist

159 The checklist follows the references. Please read the checklist guidelines carefully for information  
160 on how to answer these questions. For each question, change the default **[TODO]** to **[Yes]**, **[No]**, or  
161 **[N/A]**. You are strongly encouraged to include a **justification to your answer**, either by referencing  
162 the appropriate section of your paper or providing a brief inline description. For example:

- 163 • Did you include the license to the code and datasets? **[Yes]** See Section 2.
- 164 • Did you include the license to the code and datasets? **[No]** The code and the data are  
165 proprietary.
- 166 • Did you include the license to the code and datasets? **[N/A]**

167 Please do not modify the questions and only use the provided macros for your answers. Note that the  
168 Checklist section does not count towards the page limit. In your paper, please delete this instructions  
169 block and only keep the Checklist section heading above along with the questions/answers below.

170 1. For all authors...

- 171 (a) Do the main claims made in the abstract and introduction accurately reflect the paper's  
172 contributions and scope? **[TODO]**
- 173 (b) Did you describe the limitations of your work? **[TODO]**
- 174 (c) Did you discuss any potential negative societal impacts of your work? **[TODO]**
- 175 (d) Have you read the ethics review guidelines and ensured that your paper conforms to  
176 them? **[TODO]**

177 2. If you are including theoretical results...

- 178 (a) Did you state the full set of assumptions of all theoretical results? **[TODO]**  
179 (b) Did you include complete proofs of all theoretical results? **[TODO]**  
180 3. If you ran experiments...  
181 (a) Did you include the code, data, and instructions needed to reproduce the main experi-  
182 mental results (either in the supplemental material or as a URL)? **[TODO]**  
183 (b) Did you specify all the training details (e.g., data splits, hyperparameters, how they  
184 were chosen)? **[TODO]**  
185 (c) Did you report error bars (e.g., with respect to the random seed after running experi-  
186 ments multiple times)? **[TODO]**  
187 (d) Did you include the total amount of compute and the type of resources used (e.g., type  
188 of GPUs, internal cluster, or cloud provider)? **[TODO]**  
189 4. If you are using existing assets (e.g., code, data, models) or curating/releasing new assets...  
190 (a) If your work uses existing assets, did you cite the creators? **[TODO]**  
191 (b) Did you mention the license of the assets? **[TODO]**  
192 (c) Did you include any new assets either in the supplemental material or as a URL?  
193 **[TODO]**  
194 (d) Did you discuss whether and how consent was obtained from people whose data  
195 you're using/curating? **[TODO]**  
196 (e) Did you discuss whether the data you are using/curating contains personally identifi-  
197 able information or offensive content? **[TODO]**  
198 5. If you used crowdsourcing or conducted research with human subjects...  
199 (a) Did you include the full text of instructions given to participants and screenshots, if  
200 applicable? **[TODO]**  
201 (b) Did you describe any potential participant risks, with links to Institutional Review  
202 Board (IRB) approvals, if applicable? **[TODO]**  
203 (c) Did you include the estimated hourly wage paid to participants and the total amount  
204 spent on participant compensation? **[TODO]**

## 205 **A Appendix**

206 Optionally include extra information (complete proofs, additional experiments and plots) in the  
207 appendix. This section will often be part of the supplemental material.