# 000 001

## 002 004

016

014

018 021

022

025 026 027

028 029 031

033 034

037 038

040 041 042

043 044

046 047

048

051 052

### **Formatting Instructions for NIPS 2015**

#### **Anonymous Author(s)**

Affiliation Address email

#### Abstract

The abstract paragraph should be indented 1/2 inch (3 picas) on both left and righthand margins. Use 10 point type, with a vertical spacing 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.

#### **Submission of papers to NIPS 2015**

NIPS requires electronic submissions. The electronic submission site is

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

#### 1.1 Style

Papers to be submitted to NIPS 2015 must be prepared according to the instructions presented here. Papers may be only up to eight pages long, including figures. Since 2009 an additional ninth page containing only cited references is allowed. Papers that exceed nine pages will not be reviewed, or in any other way considered for presentation at the conference.

Please note that this year we have introduced automatic line number generation into the style file (for LaTeX  $2\varepsilon$  and Word versions). This is to help reviewers refer to specific lines of the paper when they make their comments. Please do NOT refer to these line numbers in your paper as they will be removed from the style file for the final version of accepted papers.

The margins in 2015 are the same as since 2007, which allow for  $\approx 15\%$  more words in the paper compared to earlier years. We are also again using double-blind reviewing. Both of these require the use of new style files.

Authors are required to use the NIPS LATEX style files obtainable at the NIPS website as indicated below. Please make sure you use the current files and not previous versions. Tweaking the style files may be grounds for rejection.

#### 1.2 Retrieval of style files

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

The file nips2015.pdf contains these instructions and illustrates the various formatting requirements your NIPS paper must satisfy. LATEX users can choose between two style files: nips15submit\_09.sty (to be used with LATEX version 2.09) and nips15submit\_e.sty (to be used with LATEX2e). The file nips2015.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. The file nips2015.rtf is provided as a shell for MS Word users.

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

#### 2 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 of 11 points. Times New Roman is the preferred typeface throughout. Paragraphs are separated by 1/2 line space, with no indentation.

Paper title is 17 point, initial caps/lower case, bold, centered between 2 horizontal rules. Top rule is 4 points thick and bottom rule is 1 point thick. Allow 1/4 inch space above and below title to rules. All pages should start at 1 inch (6 picas) from the top of the page.

For the final version, authors' names are set in boldface, and each name is centered above the 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 co-author side by side.

Please pay special attention to the instructions in section 4 regarding figures, tables, acknowledgments, and references.

#### 3 Headings: first level

First level headings are lower case (except for first word and proper nouns), flush left, bold and in point size 12. One line space before the first level heading and 1/2 line space after the first level heading.

#### 3.1 Headings: second level

Second level headings are lower case (except for first word and proper nouns), flush left, bold and in point size 10. One line space before the second level heading and 1/2 line space after the second level heading.

#### 3.1.1 Headings: third level

Third level headings are lower case (except for first word and proper nouns), flush left, bold and in point size 10. One line space before the third level heading and 1/2 line space after the third level heading.

#### 4 Citations, figures, tables, references

These instructions apply to everyone, regardless of the formatter being used.

#### 4.1 Citations within the text

Citations within the text should be numbered consecutively. The corresponding number is to appear enclosed in square brackets, such as [1] or [2]-[5]. The corresponding references are to be listed in the same order at the end of the paper, in the **References** section. (Note: the standard BIBTEX style unsrt produces this.) As to the format of the references themselves, any style is acceptable as long as it is used consistently.

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

108				
109		Τ	Table 1: Sample table title	
110		PART	DESCRIPTION	
111				
112		Dendrite	Input terminal	
113		Axon	Output terminal	
114		Soma	Cell body (contains cell n	ucleus)
115				
116				
117	that are not widely availah	de (e.g. a io	urnal naper under review) u	ise anonymous author names in the
118	citation, e.g. an author of			ase anonymous author names in the
119	oradion, e.g. air aatrior or	101111 11	. Thony mous	
120				
121	4.2 Footnotes			
122	Indicate footnates with a		ha taut. Dlaga tha factuatas	at the bettern of the man on which
123	Indicate footnotes with a number <sup>1</sup> 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). <sup>2</sup>			
124	they appear. I recede the I	oothote with	n a norizontal rule of 2 men	ics (12 picas).
125				
126	4.3 Figures			
127	A11 . 1 . 1 1			1 1 6
128	All artwork must be neat, clean, and legible. Lines should be dark enough for purposes of reproductions of work about a part of the board drawn. The figure number and cention always amount of the board drawn.			
129	duction; art work should not be hand-drawn. The figure number and caption always appear after the figure. Place one line space before the figure caption, and one line space after the figure caption is lower case (except for first word and proper nouns); figures are numbered consecutively.			
130 131				
132	Make sure the figure caption does not get separated from the figure. Leave sufficient space to avoid			
133	splitting the figure and fig	ure caption.		
134				otions and the paper body to make
135	sense if the paper is printed either in black/white or in color.			
136 137				
138				
139				
140				
141				
142				
143				
144				
145				
146				
147				
148				
149		Figu	re 1: Sample figure caption	1.
150				

#### 4.4 Tables

All tables must be centered, neat, clean and legible. Do not use hand-drawn tables. 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 numbered consecutively.

<sup>&</sup>lt;sup>1</sup>Sample of the first footnote

<sup>&</sup>lt;sup>2</sup>Sample of the second footnote

#### 5 Final instructions

162

163 164

165

166

167 168

170

171

172

173

174 175

176

177

178

179

180

181

182

183

185

186

187

188

189

190

192 193

196

199

200

202

203

204 205

206

207

208

210

211

212

213

214

215

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.

#### 6 Preparing PostScript or PDF files

Please prepare PostScript or PDF files with paper size "US Letter", and not, for example, "A4". The -t letter option on dvips will produce US Letter files.

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 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 NIPS. Please see http://www.emfield.org/icuwb2010/downloads/IEEE-PDF-SpecV32.pdf
- LaTeX users:
  - Consider directly generating PDF files using pdflatex (especially if you are a MiK-TeX user). PDF figures must be substituted for EPS figures, however.
  - Otherwise, please generate your PostScript and PDF files with the following commands:

```
dvips mypaper.dvi -t letter -Ppdf -G0 -o mypaper.ps
ps2pdf mypaper.ps mypaper.pdf
```

Check that the PDF files only contains Type 1 fonts.

- xfig "patterned" shapes are implemented with bitmap fonts. Use "solid" shapes instead.
- The \bbold package almost always uses bitmap fonts. You can try the equivalent AMS Fonts with command

```
\usepackage[psamsfonts]{amssymb}
```

or use the following workaround for reals, natural and complex:

- Sometimes the problematic fonts are used in figures included in LaTeX files. The ghostscript program eps2eps is the simplest way to clean such figures. For black and white figures, slightly better results can be achieved with program potrace.
- MSWord and Windows users (via PDF file):
  - Install the Microsoft Save as PDF Office 2007 Add-in from http: //www.microsoft.com/downloads/details.aspx?displaylang= en&familyid=4d951911-3e7e-4ae6-b059-a2e79ed87041
  - Select "Save or Publish to PDF" from the Office or File menu
- MSWord and Mac OS X users (via PDF file):
  - From the print menu, click the PDF drop-down box, and select "Save as PDF..."
- MSWord and Windows users (via PS file):
  - To create a new printer on your computer, install the AdobePS printer driver and the Adobe Distiller PPD file from http://www.adobe.com/support/ downloads/detail.jsp?ftpID=204 Note: You must reboot your PC after installing the AdobePS driver for it to take effect.

- To produce the ps file, select "Print" from the MS app, choose the installed AdobePS printer, click on "Properties", click on "Advanced."
- Set "TrueType Font" to be "Download as Softfont"
- Open the "PostScript Options" folder
- Select "PostScript Output Option" to be "Optimize for Portability"
- Select "TrueType Font Download Option" to be "Outline"
- Select "Send PostScript Error Handler" to be "No"
- Click "OK" three times, print your file.
- Now, use Adobe Acrobat Distiller or ps2pdf to create a PDF file from the PS file. In Acrobat, check the option "Embed all fonts" if applicable.

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

#### 6.1 Margins in LaTeX

or

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

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

for .pdf graphics. See section 4.4 in the graphics bundle documentation (http://www.ctan. org/tex-archive/macros/latex/required/graphics/grfguide.ps)

A number of width problems arise when LaTeX cannot properly hyphenate a line. Please give LaTeX hyphenation hints using the \-command.

#### Acknowledgments

Use unnumbered third level headings for the acknowledgments. All acknowledgments go at the end of the paper. Do not include acknowledgments in the anonymized submission, only in the final paper.

#### References

References follow the acknowledgments. Use unnumbered third 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. Remember that this year you can use a ninth page as long as it contains *only* cited references.

- [1] Alexander, J.A. & Mozer, M.C. (1995) Template-based algorithms for connectionist rule extraction. In G. Tesauro, D. S. Touretzky and T.K. Leen (eds.), *Advances in Neural Information Processing Systems* 7, pp. 609-616. Cambridge, MA: MIT Press.
- [2] Bower, J.M. & Beeman, D. (1995) The Book of GENESIS: Exploring Realistic Neural Models with the GEneral NEural SImulation System. New York: TELOS/Springer-Verlag.
- [3] Hasselmo, M.E., Schnell, E. & Barkai, E. (1995) Dynamics of learning and recall at excitatory recurrent synapses and cholinergic modulation in rat hippocampal region CA3. *Journal of Neuroscience* **15**(7):5249-5262.