# Formatting Instructions for NIPS*2005

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## Abstract

The abstract paragraph should be indented 1/2 inch (3 picas) on both left and right-hand 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.

## 1 Submission of papers to NIPS*2005

This year we require electronic submissions. Please read carefully the instructions below, and follow them faithfully.

Papers to be submitted to NIPS*2005 must be prepared according to the instructions presented here. Papers may be only up to 8 pages long, including figures and references. This is a strict upper bound. Papers that exceed 8 pages will not be reviewed, or in any other way considered for presentation at the conference.

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 ones and not previous versions.

You must enter your submission in the electronic submission form available at the NIPS website listed below. You will be asked to enter paper title, name of all authors, category, oral/poster preference, and data about the contact author (name, full address, telephone, fax, and email). You will need to upload an electronic (postscript or pdf) version of your paper.

**THE SUBMISSION DEADLINE IS JUNE 3, 2005. SUBMISSIONS MUST BE LOGGED BY MIDNIGHT, JUNE 3, 2005, PACIFIC DAYLIGHT TIME**

*Use footnote for providing further information about author (webpage, alternative address)—*not* for acknowledging funding agencies.

### 1.1 Retrieval of style files

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

http://www.nips.cc/

The file `nips2005.ps` (or `nips2005.pdf`) contains these instructions and illustrates the various formatting requirements your NIPS paper must satisfy. LaTeX users can choose between two style files: `nips2005.sty` (to be used with LaTeX version 2.09) and `nips2005e.sty` (to be used with LaTeX2e). The file `nips2005.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 `nips2005.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.

### 1.2 Keywords for paper submission

Your NIPS paper can be submitted with any of the following keywords (more than one keyword is possible for each paper):

```
Algorithms and Architectures
Applications
Brain Imaging
Cognitive Science and Artificial Intelligence
Control and Reinforcement Learning
Emerging Technologies
Learning Theory
Neuroscience
Speech and Signal Processing
Visual Processing
```

A description of each keyword can be found in the call for papers at the NIPS website (http://www.nips.cc/).

## 2 General formatting instructions

The text must be confined within a rectangle 5 inches (30 picas) wide and 8.25 inches (49.5 picas) long. The left margin is 1.75 inches (10.5 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. The first rule is 1.1 inches (6.6 picas) from the top of the page. Subsequent pages should start at 1 inch (6 picas) from the top of the page.

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 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.

## 4.2 Footnotes

Indicate footnotes with a number[1] 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).[2]

## 4.3 Figures

All artwork must be neat, clean, and legible. Lines should be dark enough for purposes of reproduction; art work should not be hand-drawn. Figure number and caption always appear after the figure. Place one line space before the figure caption, and one line space after the figure. The figure caption is lower case (except for first word and proper nouns); figures are numbered consecutively.

Make sure the figure caption does not get separated from the figure. Leave sufficient space to avoid splitting the figure and figure caption.

## 4.4 Tables

All tables must be centered, neat, clean and legible. Do not use hand-drawn tables. Table number and title always appear before the table. See Table 1.

[1] Sample of the first footnote

[2] Sample of the second footnote

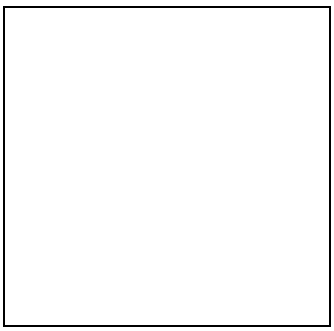

Figure 1: Sample figure caption

Table 1: Sample table title

| PART | DESCRIPTION |
|---|---|
| Dendrite | Input terminal |
| Axon | Output terminal |
| Soma | Cell body (contains cell nucleus) |

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.

## 5 Final instructions

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). Leave pages unnumbered.

## 6 Preparing PostScript or PDF files

Please prepare PostScript or PDF files with paper size ”US Letter”. 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 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.icip2004.org/Downloads/IEEE-PDF-SpecV32.pdf
- LaTeX users:
  - For MiKTeX users, please consider directly generating PDF files using `pdflatex`. 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. For the camera-ready version, please send us both the Postscript file and the PDF file.
  - 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:

    ```
    \newcommand{\RR}{I\!\!R} %real numbers
    \newcommand{\Nat}{I\!\!N} %natural numbers
    \newcommand{\CC}{I\!\!\!\!C} %complex numbers
    ```
  - 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:
  - Install the AdobePS printer driver and Adobe Distiller PPD file from http://www.adobe.com/support/techdocs/325924.html, to create a new printer on your computer. *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 first ask you to fix it. If these files do not satisfy MIT Press, we will ask for a high resolution scan of your paper.

### 6.1 Margins in LaTeX

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

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

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.

### 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.

[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.