Lecture Notes in Computer Science: Authors' Instructions for the Preparation of Camera-Ready Contributions to LNCS/LNAI Proceedings

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Abstract. The abstract should summarize the contents of the paper and should contain at least 70 and at most 150 words. It should be set in 9-point font size and should be inset 1.0 cm from the right and left margins. There should be two blank (10-point) lines before and after the abstract. . . .

1 Introduction

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[1] When generating the PS file please avoid using the option "reverse order".

2 Manuscript Preparation

You are strongly encouraged to use LaTeX (or TeX) for the preparation of your camera-ready manuscript together with the corresponding Springer class/style files `llncs` for LaTeX (or `plncs` for TeX); see Sect. 3. Only if you use LaTeX2$_\varepsilon$ can hyperlinks be generated in the online version of your manuscript.

If you are unable to use LaTeX, you may use MS Word together with the template sv-lncs.dot (see Sect. 4) or any other text processing system. In the latter case, please follow these instructions closely in order to make the volume look as uniform as possible.

2.1 Printing Area

The printing area is 122 mm × 193 mm. The text should be justified to occupy the full line width, so that the right margin is not ragged, with words hyphenated as appropriate. Please fill pages so that the length of the text is no less than 185 mm.

2.2 Layout, Typeface, and Font Sizes

Use 10-point type for the name(s) of the author(s) and 9-point type for the address(es) and the abstract. For the main text, use 10-point type and single-line spacing. We recommend using Computer Modern Roman (CM) fonts, Times, or one of the similar typefaces widely used in phototypesetting. (In these typefaces the letters have serifs, i.e., short endstrokes at the head and the foot of letters.) Italic type may be used to emphasize words in running text. Bold type and underlining should be avoided. With these sizes, the interline distance should be set so that some 45 lines occur on a full-text page.

Headings. Headings should be capitalized (i.e., nouns, verbs, and all other words except articles, prepositions, and conjunctions should be set with an initial capital) and should, with the exception of the title, be aligned to the left. Words joined by a hyphen are subject to a special rule. If the first word can stand alone, the second word should be capitalized. The font sizes are given in Table 1.

Here are some examples of headings: “Criteria to Disprove Context-Freeness of Collage Languages”, “On Correcting the Intrusion of Tracing Non-deterministic Programs by Software”, “A User-Friendly and Extendable Data Distribution System”, “Multi-flip Networks: Parallelizing GenSAT”.

2.3 Figures and Photographs

Please produce your figures electronically, if possible, and integrate them into your text file. For LaTeX users we recommend using the style files `psfig` or `epsf` (see Sect. 3).

Table 1. Font sizes of headings. Table captions should always be positioned *above* the tables

Heading level	Example	Font size and style
Title (centered)	**Lecture Notes ...**	14 point, bold
1st-level heading	**1 Introduction**	12 point, bold
2nd-level heading	**2.1 Printing Area**	10 point, bold
3rd-level heading	**Headings.** Text follows ...	10 point, bold
4th-level heading	*Remark.* Text follows ...	10 point, italic

Check that in line drawings, lines are not interrupted and have constant width. Grids and details within the figures must be clearly readable and may not be written one on top of the other. Line drawings should have a resolution of at least 800 dpi (preferably 1200 dpi). For digital halftones 300 dpi is usually sufficient. The lettering in figures should have a height of 2 mm (10-point type). Figures should be scaled up or down accordingly. Please do not use any absolute coordinates in figures. If possible, the files of figures (e.g. PS files) should not contain binary data, but be saved in ASCII format.

If you cannot provide your figures electronically, paste originals into the manuscript and center them between the margins; if no originals of the required size are available, figures may be photoreduced and copies pasted into the text. For halftone figures (photos), please forward high-contrast glossy prints and mark the space in the text as well as the back of the photos clearly, so that there can be no doubt about where or which way up they should be placed.

Figures should be numbered and each should have a legend which should always be positioned *under* the figures. Center the legends between the margins and set them in 9-point type (Fig. 1 shows an example). The distance between text and figure should be about 8 mm, the distance between figure and legend about 5 mm.

If possible (e.g. if you use LaTeX) please define figures as floating objects. LaTeX users, please avoid furthermore using the location parameter "h" for "here". If you have to insert a pagebreak before a figure, please ensure that the previous page is completely filled.

Remark 1. In the printed volumes, illustrations are generally black and white (halftones), and only in exceptional cases, and if the author is prepared to cover the extra cost for color reproduction, are color pictures accepted. If color illustrations are necessary, please send us color-separated files if possible. Color pictures are welcome in the electronic version at no additional cost.

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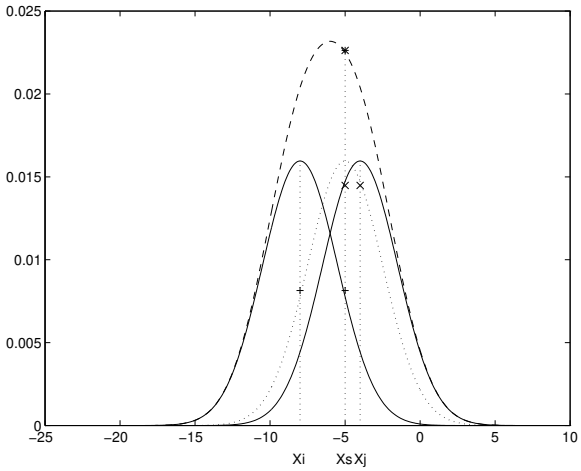

Fig. 1. One kernel at x_s (*dotted kernel*) or two kernels at x_i and x_j (*left and right*) lead to the same summed estimate at x_s. This shows a figure consisting of different types of lines to describe individual aspects. The description of elements within the figure should be set italic, in parentheses, as shown in this sample figure legend. The last sentence of a figure caption should generally end without a period

2.4 Formulas

Displayed equations or formulas are centered and set on a separate line (with an extra line or halfline space above and below). Displayed expressions should be numbered for reference. The numbers should be consecutive within each section or within the contribution, with numbers enclosed in parentheses and set on the right margin. For example,

$$\psi(u) = \int_o^T \left[\frac{1}{2}\left(\Lambda_o^{-1}u, u\right) + N^*(-u)\right] dt \; . \tag{1}$$

Punctuate a displayed equation in the same way as ordinary text but with a small space before the end punctuation. LaTeX users can find more examples of how to typeset equations in the file `llncs.dem` (see Sect. 3).

2.5 Program Code

Program listings or program commands in the text are normally set in typewriter font, e.g., CMTT10 or Courier.

Example of a Computer Program

```
program Inflation (Output)
  {Assuming annual inflation rates of 7%, 8%, and 10%,...
   years};
```

```
   const
     MaxYears = 10;
   var
     Year: 0..MaxYears;
     Factor1, Factor2, Factor3: Real;
   begin
     Year := 0;
     Factor1 := 1.0; Factor2 := 1.0; Factor3 := 1.0;
     WriteLn('Year  7% 8% 10%'); WriteLn;
     repeat
       Year := Year + 1;
       Factor1 := Factor1 * 1.07;
       Factor2 := Factor2 * 1.08;
       Factor3 := Factor3 * 1.10;
       WriteLn(Year:5,Factor1:7:3,Factor2:7:3,Factor3:7:3)
     until Year = MaxYears
end.
```

(Example from Jensen K., Wirth N. (1991) Pascal user manual and report. Springer, New York)

2.6 Footnotes

The superscript numeral used to refer to a footnote appears in the text either directly after the word to be discussed or – in relation to a phrase or a sentence – following the punctuation sign (comma, semicolon, or period). The footnotes should appear at the bottom of the normal text area, with a line 2 cm long set immediately above them.[2]

2.7 Citations

The list of references is headed "References" and is not assigned a number in the decimal system of headings. The list should be set in small print and placed at the end of your contribution. Please do not insert a pagebreak before the list of references if the page is not completely filled. An example is given at the end of this information sheet. For citations in the text please use square brackets and consecutive numbers: [1], [2], [3], ...

2.8 Page Numbering and Running Heads

Your paper should show no printed page numbers; they are allocated by the volume editor. Indicate the ordering of your pages by numbering the sheets in pencil at the bottom of the reverse side. Do not set running heads.

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2.9 Printing Quality

For reproduction we need sheets which are printed on one side only. Please use a high-resolution printer, preferably a laser printer with at least 300 dpi. We prefer the text to be centered on the pages (i.e., equal margins left and right and top and bottom).

3 Using LaTeX or TeX

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If you are unable to use LaTeX2$_\varepsilon$ you may use one of our old macro packages `llncs` (for LaTeX) or `plncs` (for TeX).

3.1 How to Access the Springer LaTeX2$_\varepsilon$, LaTeX, and TeX Macro Packages

For users of LaTeX (or TeX) Springer-Verlag provides the macro package `llncs` for LaTeX (or `plncs` for TeX). The packages can be obtained by ftp/gopher or by email as follows:

Ftp: The internet address is `trick.ntp.springer.de`, the user ID is `ftp` or `anonymous`. Please enter your email address as password. The files (mentioned above) can be found in `/pub/tex`. In the directory

`ftp://trick.ntp.springer.de/pub/tex/latex/llncs/latex2e`

you will find all files belonging to the LaTeX2$_\varepsilon$ package for LNCS. `llncs.dem` is a sample input file which you may take as a source for your own input. `llncs.doc` is the documentation of the class; `llncs.dvi` the resulting DVI file of `llncs.doc`.

Gopher: Point your client to `trick.ntp.springer.de`.

Mailserver: Send an email message to `svserv@vax.ntp.springer.de` containing the line

`get /tex/latex/llncs2e.zip`	to get the LaTeX2$_\varepsilon$ style files,
`get /tex/latex/llncs.zip`	to get the LaTeX style files, or
`get /tex/plain/plncs.zip`	to get the TeX style files.

Sending `help` to the server prompts advice on how to interact with the mail server. The style files must be unzipped and uu-decoded before use. In case of problems in getting or uu-decoding the style files please contact `springer@vax.ntp.springer.de`.

3.2 Further Instructions for LaTeX and TeX Users

Please always cancel any superfluous definitions that are not actually used in your text. If you don't, these may conflict with the definitions of the macro

package, causing changes in the structure of the text and leading to numerous mistakes in the proofs.

When you use LaTeX or TeX and our macro packages, your text is typeset automatically in Computer Modern Roman (CM) fonts. Please do *not* change the preset fonts. If you have to use fonts other than the preset fonts, please submit these with your files.

Please use the commands `\label` and `\ref` for cross-references and the commands `\bibitem` and `\cite` for references to the bibliography, to enable us to create hyperlinks at these places.

For preparing your figures electronically and integrating them into your TEX file we recommend using the style files `psfig` or `epsf`. You can download them from the DANTE ftp server at the locations

`ftp://ftp.dante.de/tex-archive/graphics/psfig/psfig.sty` or

`ftp://ftp.dante.de/tex-archive/systems/knuth/local/lib/epsf.tex`.

In the past, these styles have worked smoothly with our macro package.

In general, please refrain from using the `\special` command. For further details about figure preparation see Sect. 2.3.

Remember to submit the psfig or epsf files and further style files and fonts you have used together with your source files.

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thors to complete and sign. (It is sufficient if one author from each contribution signs the form on behalf of all the other authors.) The copyright form is located on our Web page at `http://www.springer.de/comp/lncs/copyrigh.html`. The printed form should be completed and signed and sent on to the volume editors either by normal mail or by fax, who then send it on to us, together with the printed manuscript.

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References

1. Baldonado, M., Chang, C.-C.K., Gravano, L., Paepcke, A.: The Stanford Digital Library Metadata Architecture. Int. J. Digit. Libr. **1** (1997) 108–121
2. Bruce, K.B., Cardelli, L., Pierce, B.C.: Comparing Object Encodings. In: Abadi, M., Ito, T. (eds.): Theoretical Aspects of Computer Software. Lecture Notes in Computer Science, Vol. 1281. Springer-Verlag, Berlin Heidelberg New York (1997) 415–438
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