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

The preparation of manuscripts which are to be reproduced by photo-offset requires special care. Papers submitted in a technically unsuitable form will be returned for retyping, or canceled if the volume cannot otherwise be finished on time.

1.1 New Feature: LNCS Online from 1998 on

Springer-Verlag now provides the full text version of the LNCS and LNAI proceedings online. Therefore please submit, together with your own printout of the final version of your contribution, your source (input) files, e.g. TEX files, PS or EPS files for figures, the final DVI file, and the final PS file[1]. Make sure that the text is *identical* in all cases.

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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.

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. Manuscripts prepared in this format are reproduced in the same size in the book.

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. The font sizes are given in Table 1.

Table 1. Font sizes of headings

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

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).

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.

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. 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.

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

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.

Remark 2. To ensure that we can reproduce your pictures in reasonable quality we advise against using shading. The pictures should have good contrast. This particularly applies for screenshots.

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. 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.

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).

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[2] The footnote numeral is set flush left and the text follows with the usual word spacing. Second and subsequent lines are indented. Footnotes should end with a period.

3 Using LaTeX or TeX

You will get the best results and your files will be easiest to handle if you use LaTeX2$_\varepsilon$ for the preparation of your camera-ready manuscript together with the corresponding Springer class file `llncs.cls`. Only if you use LaTeX2$_\varepsilon$ can hyperlinks be generated in the online version of your manuscript.

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.

4 Using MS Word

For MS Word users we provide the template sv-lncs.dot to help you to prepare your camera-ready manuscript and to enable us to use your source files for the online version of the LNCS. If you would like to access the template sv-lncs.dot for MS Word, please send an email to `LNCS@Springer.de`.

5 Supplementary Material

If you wish to include color illustrations in the electronic version in place of or in addition to any black and white illustrations in the printed version, please provide us with the appropriate files.

If you have supplementary material, e.g., executable files, video clips, or audio recordings, on your server, simply send us a short description of the supplementary material and inform us of the URL at which it can be found. We will add the description of the supplementary material in the online version of LNCS and create a link to your server.

6 Consent to Publish Form

Until now, we have always had a very liberal policy regarding copyright. However, we have been forced to introduce a so-called consent to publish form, which we ask all contributing authors to complete and sign. The consent to publish form will be located on our new Web page. However, until we have completed the new Web page, please send an email to Antje Endemann at `Endemann@Springer.de` and ask her to send you the form electronically. The printed form should be completed and signed and sent on to the volume editors, who then send it on to us, together with the printed manuscript.

7 Checklist

When submitting your camera-ready manuscript to the volume editor, please make sure you include the following:

- a printout (not a photocopy) of the final version of your contribution (unless otherwise specified by the volume editor),
- your source (input) files, e.g. TEX files for the text and PS or EPS files for the figures,
- any style files, templates, and special fonts you may have used,
- the final DVI file,
- the final PS file (not in reverse order).

If supplementary material is available, please provide us with

- a short description of the supplementary material,
- the URL at which it can be found,
- the files of color figures for the electronic version.

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., Takayasu, I. (eds.): Theoretical Aspects of Computer Software. Lecture Notes in Computer Science, Vol. 1281. Springer-Verlag, Berlin Heidelberg New York (1997) 415–438
3. van Leeuwen, J. (ed.): Computer Science Today. Recent Trends and Developments. Lecture Notes in Computer Science, Vol. 1000. Springer-Verlag, Berlin Heidelberg New York (1995)
4. Michalewicz, Z.: Genetic Algorithms + Data Structures = Evolution Programs. 3rd edn. Springer-Verlag, Berlin Heidelberg New York (1996)

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