

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

**Names must be added only on the camera ready version once the paper is accepted**

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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. This document is in the required format.

**Keywords:** We would like to encourage you to list your keywords in this section.

## 1 Introduction

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## **2 Paper Preparation**

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 180 mm, if possible.

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, please use 10-point type and single-line spacing. We recommend the use of Computer Modern Roman or Times. Italic

type may be used to emphasize words in running text. Bold type and underlining should be avoided.

Papers not complying with the LNCS style will be reformatted. This can lead to an increase in the overall number of pages. We would therefore urge you not to squash your paper.

**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", "Self-determinations of Man".

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

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

**Lemmas, Propositions, and Theorems.** The numbers accorded to lemmas, propositions, and theorems, etc. should appear in consecutive order, starting with Lemma 1, and not, for example, with Lemma 11.

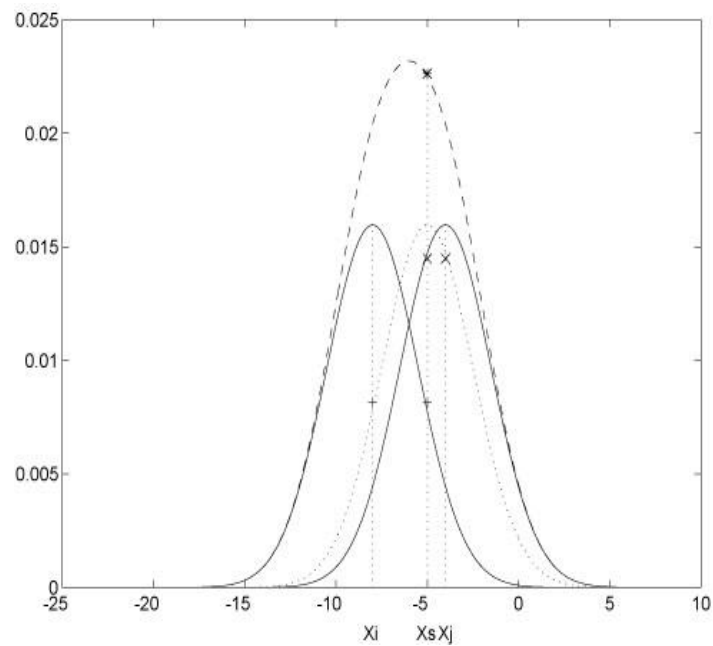
## 2.1 Figures

Please check that the lines in line drawings are not interrupted and have a constant width. Grids and details within the figures must be clearly legible 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). The lettering in figures should have a height of 2 mm (10-point type). Figures should be numbered and should have a caption which should always be positioned *under* the figures, in contrast to the caption belonging to a table, which should always appear *above* the table. Please center the captions 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 caption about 6 mm.

To ensure that the reproduction of your illustrations is of a reasonable quality, we advise against the use of shading. The contrast should be as pronounced as possible.

If screenshots are necessary, please make sure that you are happy with the print quality before you send the files.

*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 costs involved, are colored pictures accepted. Colored pictures are welcome in the electronic version free of charge. If you send colored figures that are to be printed in black and white, please make sure that they really are legible in black and white. Some colors show up very poorly when printed in black and white.



**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. Elements of the figure described in the caption should be set in italics, in parentheses, as shown in this sample caption.

## 2.2 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.

$$x + y = z . \tag{1}$$

Equations should be punctuated in the same way as ordinary text but with a small space before the end punctuation mark.

## 2.3 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 mark (comma, semicolon, or period). Footnotes should appear at the bottom of the normal text area, with a line of about 5cm set immediately above them<sup>1</sup>.

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

```
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;
```

---

<sup>1</sup> The footnote numeral is set flush left and the text follows with the usual word spacing.

```
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.
```

## 2.5 Citations

For citations in the text please use square brackets and consecutive numbers: [1], [2], [3], etc.

## 2.6 Page Numbering and Running Heads

There is no need to include page numbers. If your paper title is too long to serve as a running head, it will be shortened. Your suggestion as to how to shorten it would be most welcome.

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**Acknowledgments.** The heading should be treated as a 3<sup>rd</sup> level heading and should not be assigned a number.

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The following section shows a sample reference list with entries for journal articles [1], an LNCS chapter [2], a book [3], proceedings without editors [4] and [5], as well as a URL [6]. Please note that proceedings published in LNCS are not cited with their full titles, but with their acronyms!

### References

1. Smith, T.F., Waterman, M.S.: Identification of Common Molecular Subsequences. *J. Mol. Biol.* 147, 195--197 (1981)
2. May, P., Ehrlich, H.C., Steinke, T.: ZIB Structure Prediction Pipeline: Composing a Complex Biological Workflow through Web Services. In: Nagel, W.E., Walter, W.V., Lehner, W. (eds.) *Euro-Par 2006*. LNCS, vol. 4128, pp. 1148--1158. Springer, Heidelberg (2006)
3. Foster, I., Kesselman, C.: *The Grid: Blueprint for a New Computing Infrastructure*. Morgan Kaufmann, San Francisco (1999)
4. Czajkowski, K., Fitzgerald, S., Foster, I., Kesselman, C.: Grid Information Services for Distributed Resource Sharing. In: 10th IEEE International Symposium on High Performance Distributed Computing, pp. 181--184. IEEE Press, New York (2001)
5. Foster, I., Kesselman, C., Nick, J., Tuecke, S.: *The Physiology of the Grid: an Open Grid Services Architecture for Distributed Systems Integration*. Technical report, Global Grid Forum (2002)
6. National Center for Biotechnology Information, <http://www.ncbi.nlm.nih.gov>

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