

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

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

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

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### 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*

```
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)

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## 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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