

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

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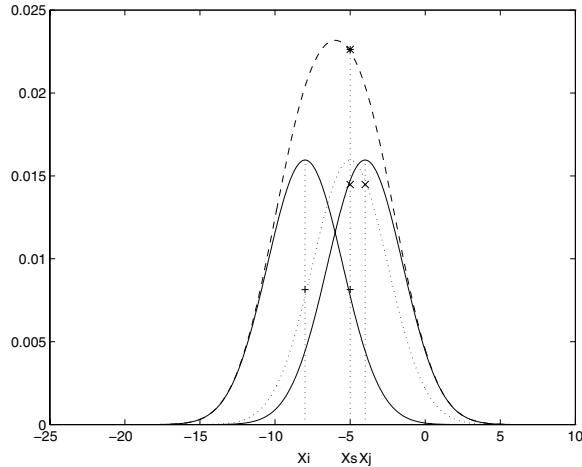
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**Fig. 1.** One kernel at  $x_s$  (dotted kernel) or two kernels at  $x_i$  and  $x_j$  (left and right) lead to the same summed estimate at  $x_s$ . This shows a figure consisting of different types of lines. Elements of the figure described in the caption should be set in italics, in parentheses, as shown in this sample caption.

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

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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. 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)
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
3. Michalewicz, Z.: Genetic Algorithms + Data Structures = Evolution Programs. 3rd edn. Springer-Verlag, Berlin Heidelberg New York (1996)
4. Baldonado, M., Chang, C.-C.K., Gravano, L., Paepcke, A.: The Stanford Digital Library Metadata Architecture. *Int. J. Digit. Libr.* **1** (1997) 108–121

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