Call for Papers

Special Issue on Application Performance Analysis

Papers are requested for a special issue of *Scientific Programming* on Application Performance Analysis. Papers should chronicle the development of scientific applications from the problem definition to the computational realization. All papers in the issue should have a uniform structure similar to that outlined below:

—Overview of the application:
  This should be in general terms, stimulate the reader, and focus attention to the importance of the application and its performance relative to the user's needs.
—Description of the algorithm:
  Also in general terms, this section should highlight the reasons for selecting the given algorithm over others, particularly with respect to reasons related to the implementation's performance.
—Description of the programming techniques:
  Without duplicating a substantial quantity of code, this section should describe the programming techniques, language(s), and libraries used to achieve the desired level of performance.
—Summary of realization performance:
  The results should be presented in terms of the successful science (even if the results are negative) and the performance of the implementation. It is ex-

pected that the implementation will be parallel (although this is not a requirement), and parallel performance results should be presented with good scientific rigor. In particular, speedup and artificial scaling results must be avoided.
Results pertaining to the effort required in program development would be of special interest.

The overall aim of this issue is to present a collection of scientific studies of the highest standard, where this standard applies to the performance experiments as well as to the science itself. Submit drafts to the Special Editor:

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(UUencoded, compressed Postscript, LaTeX, and Binhexed Microsoft Word for the Macintosh, as well as hard copy, are welcome.)

Deadline for consideration: 31 May 1994.