

Parallel Programming

Astronomical N -body Problem

Write a parallel programs to solve the N -body problem using a direct $O(n^2)$ method

Write a short report describing the problem and the results you obtain. Include timing on at least a four-computer system. Provide for at least 10 particles scattered in 2-dimensional space, and show the passage of time. Use the graphical routines in the Mandelbrot program to display the 2-dimensional space (or use other graphical routines). An example of output is shown on page 4 of the text.

Email report and results to Instructor.

For a LOT of extra credit, implement the Barnes-Hut $O(n \log n)$ algorithm.