

20 Years - Unleashing the Power of HPC

SC2001

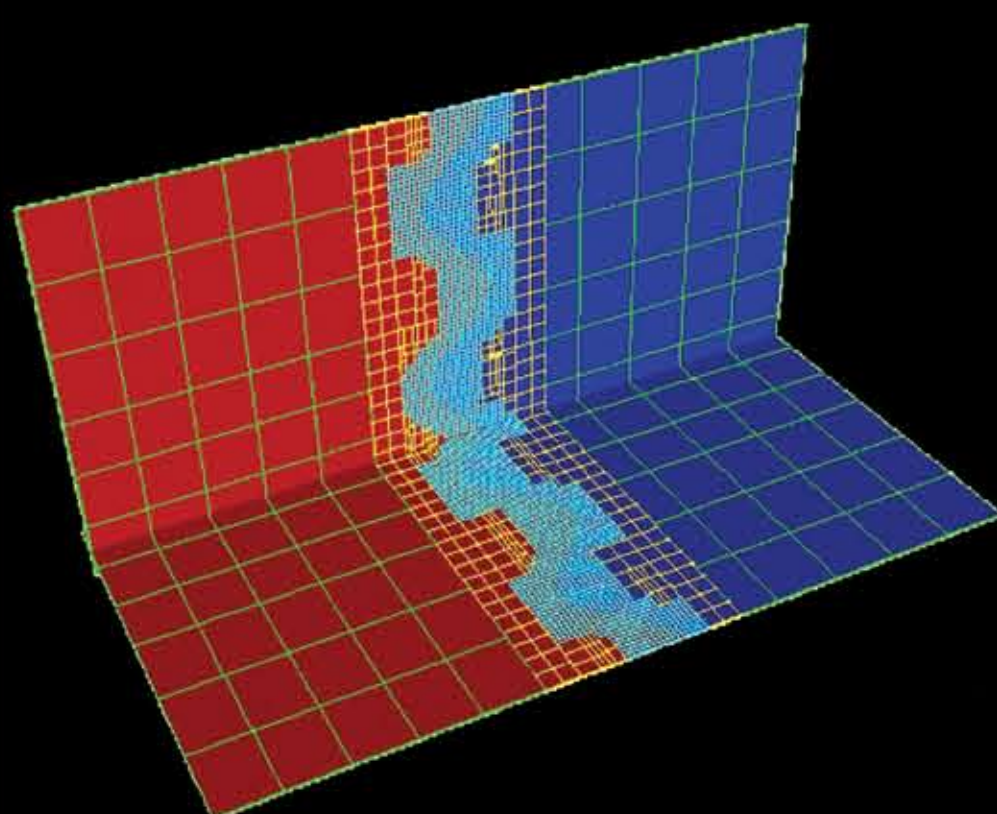
2001 Chair
Charles Slocumb
Denver, CO



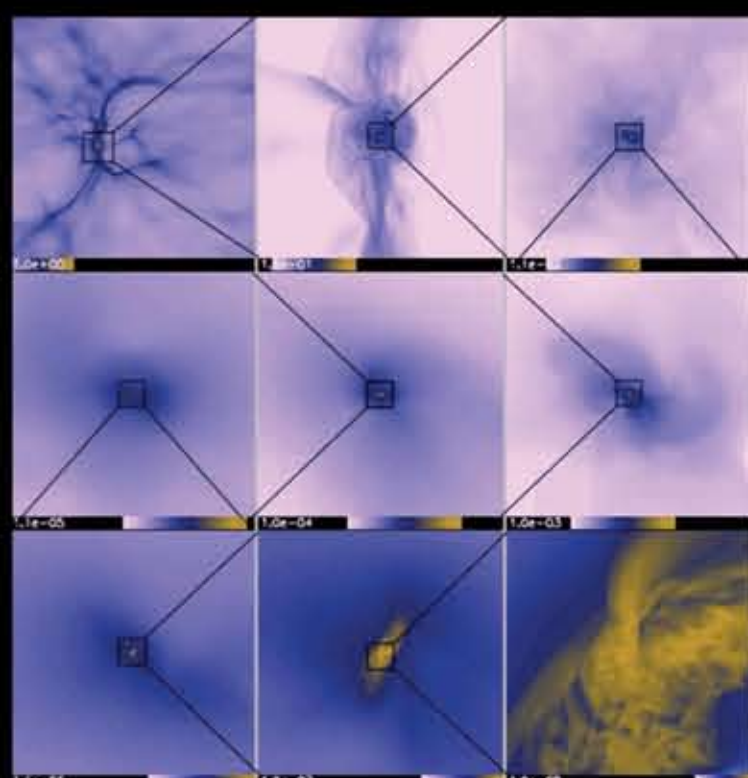
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A discrete particle simulation of 1.5 billion atoms



Adaptive mesh simulation of advecting sinusoidal density contours

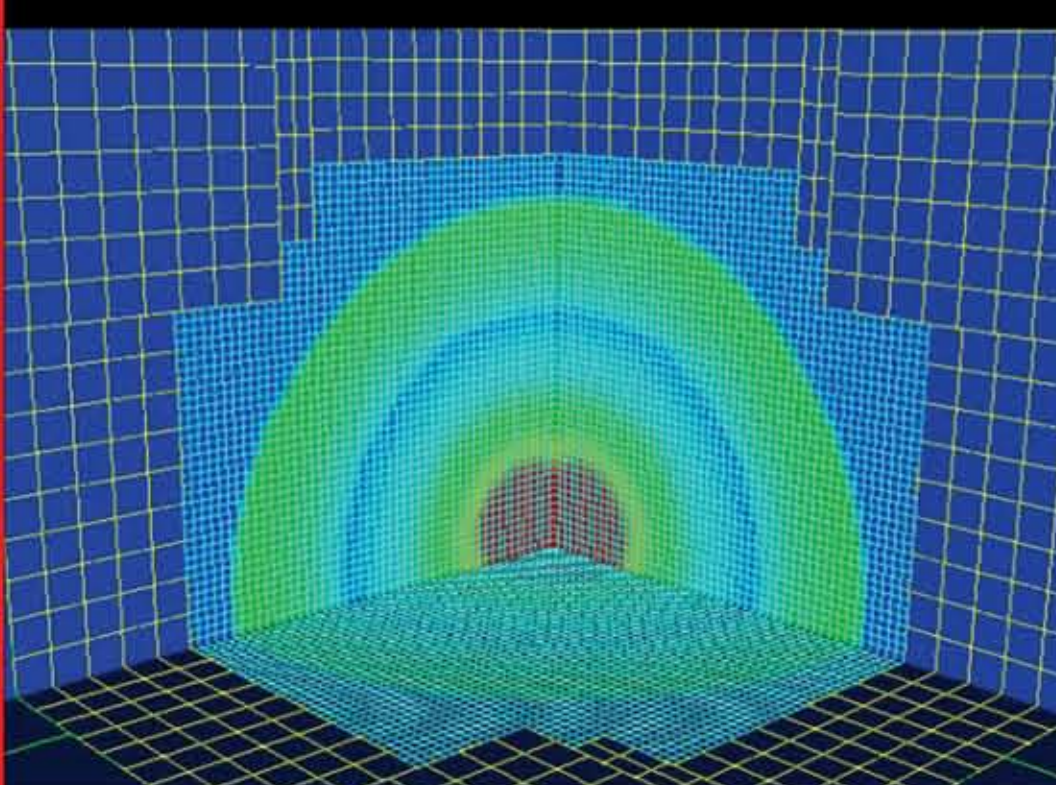


Adaptive mesh simulation of star formation



The MDM system

Adaptive mesh simulation of a spherical shock



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Notable Systems first mentioned this year in the proceedings:

- SGI Origin 3000
- Sun Fire 6000
- ASCI White
- Blue Horizon
- ASCI Blue Mountain



A WINE-2 system board

Notable Processors:

- MIPS R 12000
- Intel Pentium 4
- Intel Itanium

Noteworthy Architecture Topics:

- Cache coherence through snooping
- Application speedups through custom on-the-fly FPGA function units
- Interactive program steering
- Grid-enabled parallel computing

Notable Programming Languages:

- HDL
- PThreads

Research Machines:

- CPlant

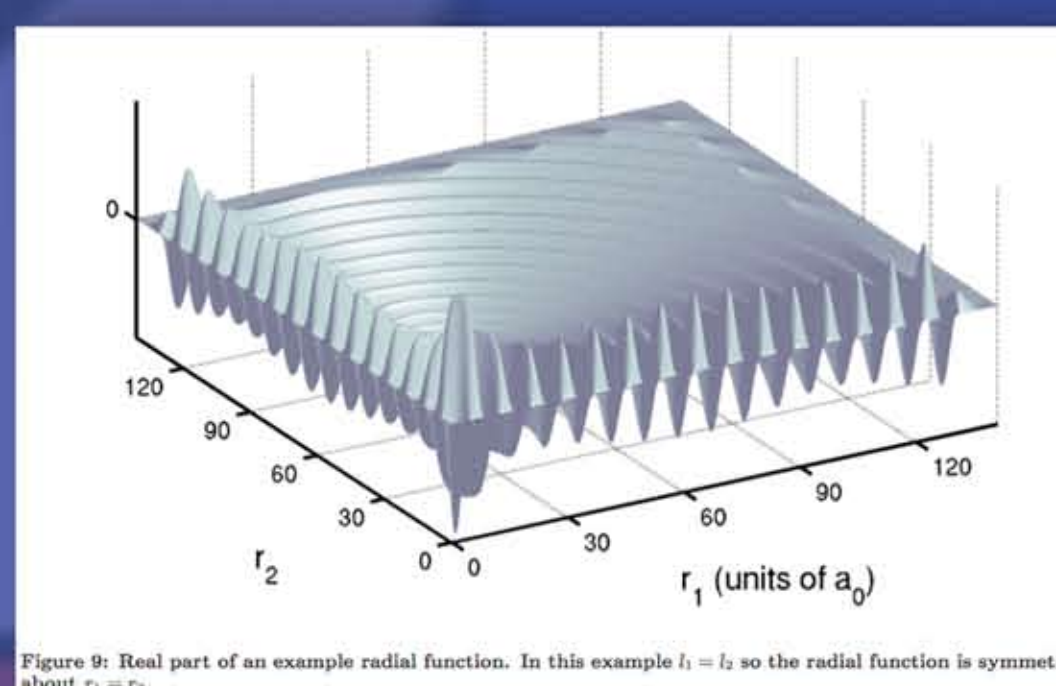


Figure 9: Real part of an example radial function. In this example $l_1 = l_2$ so the radial function is symmetric about $r_1 = r_2$.

Solution of a three body quantum mechanics problem