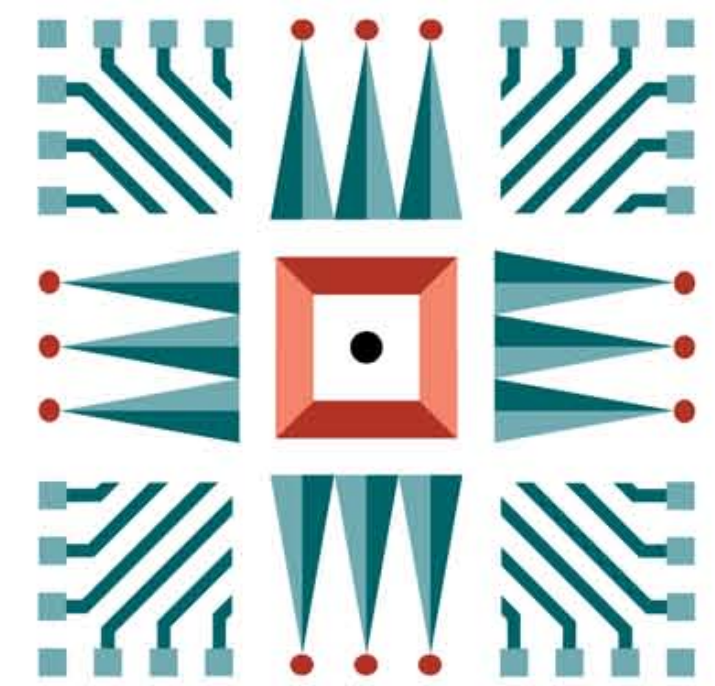


20 Years Unleashing the Power of HPC

SC97

1997 Chair
Dona Crawford
San Jose, CA



SAN JOSE **SC97** NOV. 15-21

1997

Notable Systems first mentioned this year in the proceedings:

- SGI Origin 2000
- ASCI Red
- Convex Exemplar SPP 2000
- Cray T-90

Notable Processors

- Intel Pentium Pro
- Sun UltraSPARC-II
- DEC Alpha 21164

Noteworthy Architecture Topics

- Beowulf clusters
- Heterogeneous distributed parallel computing
- Checkpointing and recovery on distributed parallel systems
- Gang scheduling

Notable Operating Systems

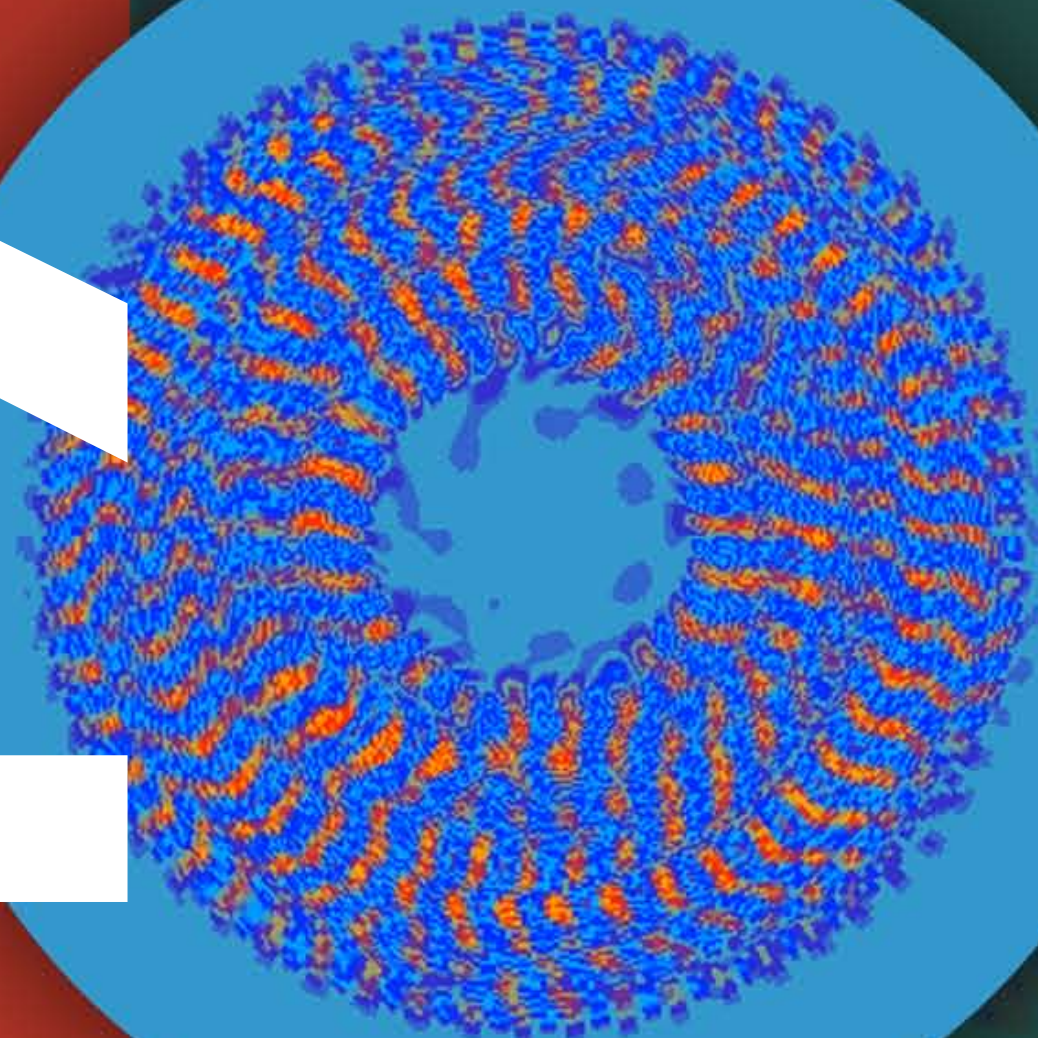
- Microsoft Windows NT
- Linux

Notable Programming Languages

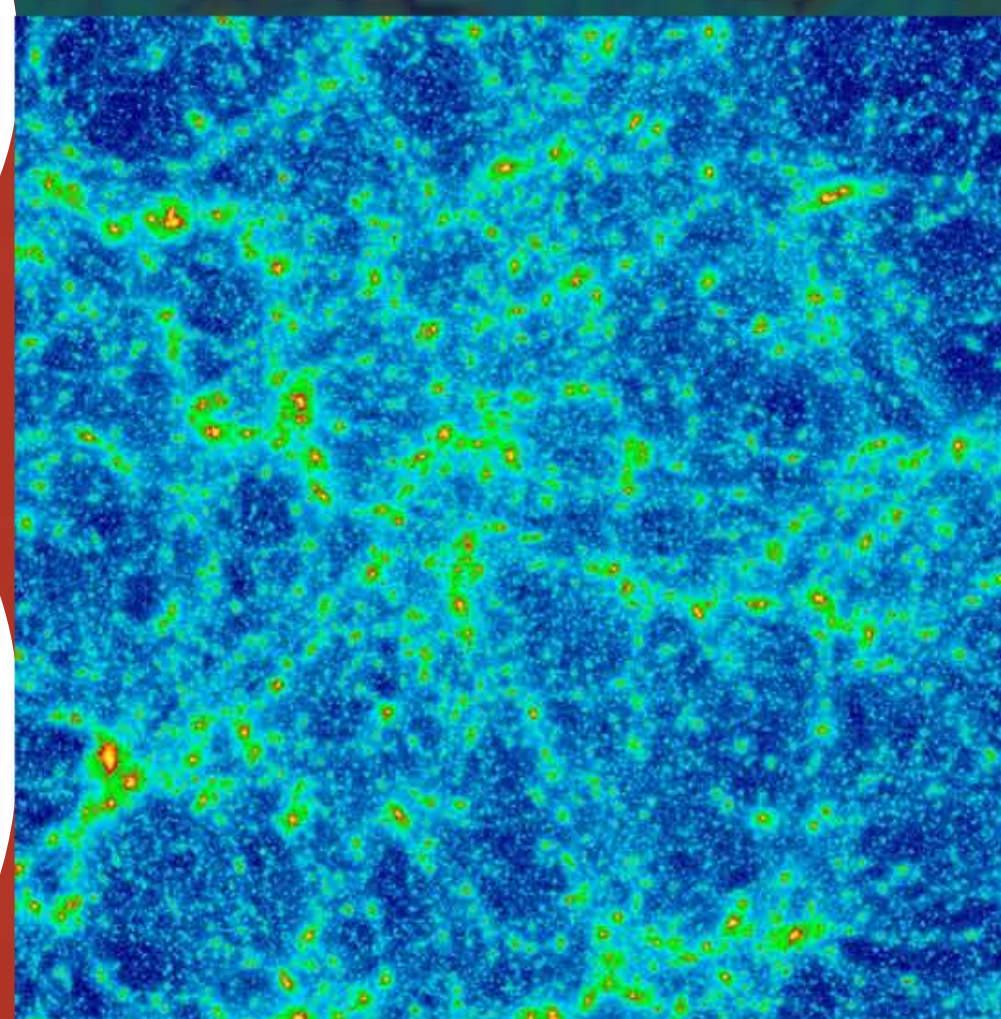
- PCP
- SHMEM

Research Machines

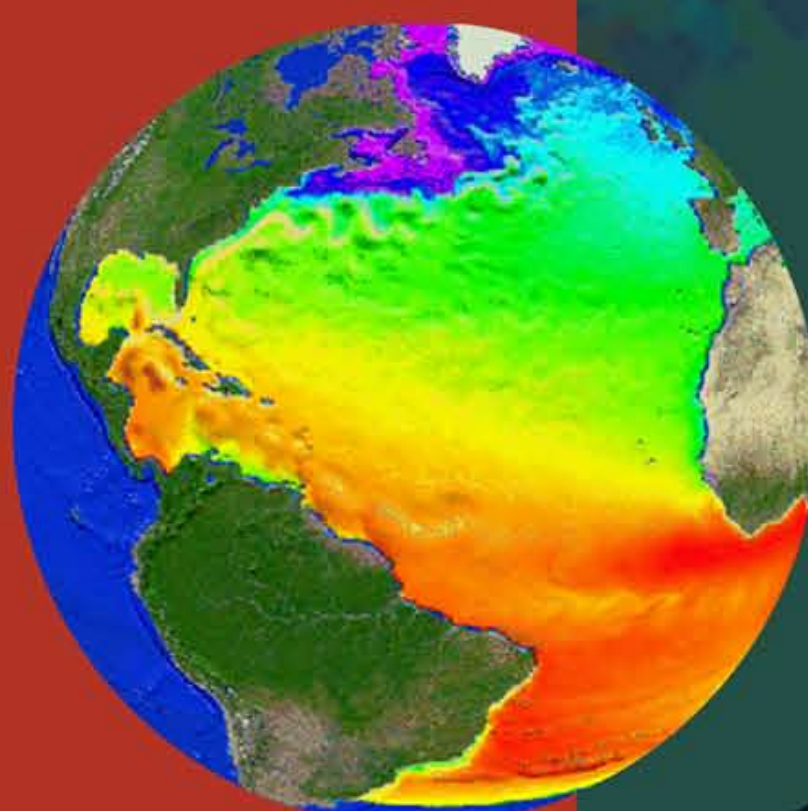
- QCDSP



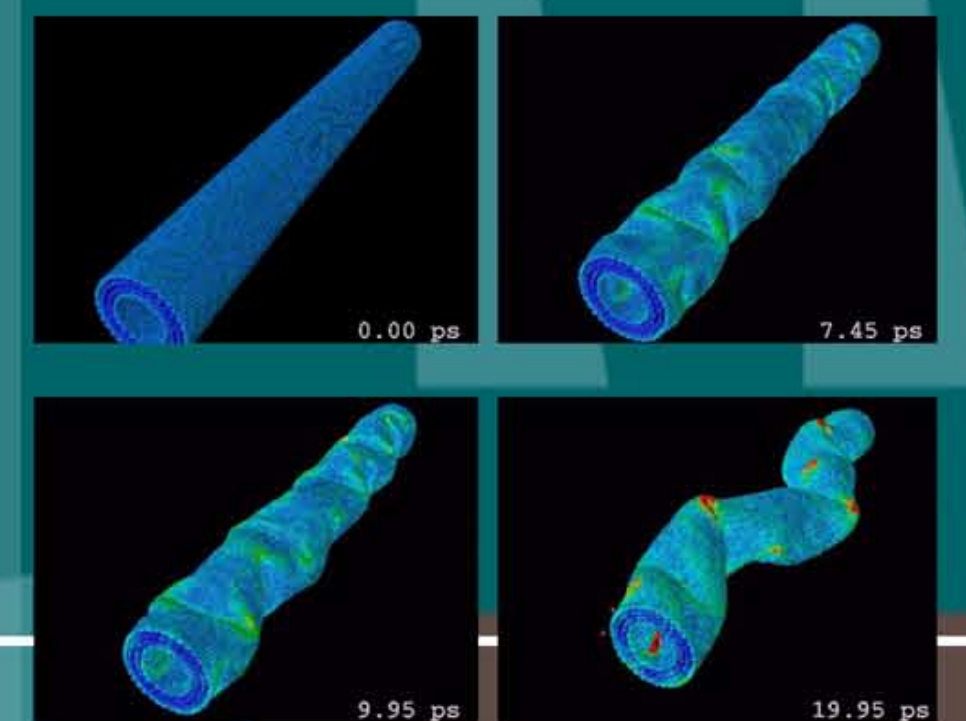
Numerical tokamak model visualization



Gravitational n-body simulation



POP global climate model visualization



Carbon nanotube deforming under strain

Table 1: Historical memory latencies

System	Memory latency [ns]	Clock speed [ns]	Ratio	FP ops per clock period	FP ops to cover memory latency
CDC 7600	275	27.5	10	1	10
CRAY 1	150	12.5	12	2	24
CRAY X-MP	120	8.5	14	2	28
SGI Power Challenge	~760	13.3	57	4	228
CRAY T3E-900	~280	2.2	126	2	252