The Supercomputing People

Centre for Development of Advanced Computing

Parallel Computing Workshop on PARAM 10000

(July 24 - 26, 2000, Monday ~ Wednesday, at IISc, Bangalore)

Venue for lectures: SERC **Hands-on Session:** SERC

Day 1: Monday, July 24, 2000

Time (Hrs)	Activity
09:30~09:45	Welcome/Training Overview
09:45~10:45	PARAM 10000 – An Overview
10:45~11:00	**Tea break**
11:00~12:00	PARAM 10000– HPCC software: Active Messages over PARAMNet *and* Compilers
12:00~14:00	**Lunch**
14:00~15:00	PARAM 10000– An overview of Message Passing Interface and CDAC-MPI
15:00~18:00	**Hands-on Session (**Day1): Basic MPI programs in FORTRAN and C, Examples on Point-to-Point and Collective communications and computations, Numerical Integration of π function, and Demonstration of HPCC software.

Day 2: Tuesday, July 25, 2000

Time (Hrs)	Activity
09:00~09:45	PARAM 10000 – HPCC Software: Debuggers and System Management Tools
09:45~10:45	Parallel Programming Models and Paradigms
10:45~11:00	**Tea break**
11:00~12:00	Principles of Parallel Algorithm Design – From Application point of view
12:00~14:00	**Lunch**
14:00~15:00	Application software: Parallelisation of Composites Analysis software by Finite Element Method (FEMCOMP)
15:00~18:00	**Hands-on Session (**Day 2): Vector-Vector multiplication, Infinity Norm of a matrix, Matrix-Vector multiplication algorithms, Matrix-Matrix multiplication algorithms, Demonstration of HPCC software**,** and Demonstration of Application software on Parallelisation of Composites Analysis by Finite Element Method (FEMCOMP).

Day 3: Wednesday, July 26, 2000

Time (Hrs)	Activity
09:00~09:45	Performance Metrics and Scalability Analysis
09:45~10:45	PARAM 10000 – System and Application Benchmarks
10:45~11:00	**Tea break**
11:00~12:00	Film Show, Open Discussions and Conclusions
12:00~14:00	**Lunch**
14:00~18:00	**Hands-on Session (Day 3):** Conjugate Gradient method to solve matrix system of linear equations, Sparse Matrix-Vector Multiplication, Sample sort algorithm, Gaussian Elimination and Jacobi method to solve matrix system of linear equations, Solution of Partial differential Equations, and Demonstration of HPCC software.