Parallel Computing Workshop and Training Program
on
PARAM 10000
(March 21 - 24, 2000, Tuesday ~ Friday, at BITS-Pilani)

Venue for lectures: ET (ROOM – 2220) **Hands-on Session: IPC**

Day 1: Tuesday, March 21, 2000

Time (Hrs)	Activity
09:30~10:00	Welcome /Training Overview
10:00~10:45	An Overview of Parallel Computing
10:45~11:15	**Tea break**
11:15~12:00	An Overview of PARAM 10000
12:30~14:00	**Lunch**
14:00~14:45	An overview of Message Passing Interface– 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

Day 2: Wednesday, March 22, 2000

Time (Hrs)	Activity
09:00~09:45	PARAMNet: Interconnection Network on PARAM 10000
10:00~10:45	An Overview of HPCC Software
10:45~11:15	**Tea break**
11:15~12:00	Performance: System and Application Benchmarks
12:30~14:00	**Lunch**
14:00~14:45	HPCC Software: Compilers
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, Gaussion Elimination and Jacobi method to solve matrix system of linear equations, Demonstration of HPCC software

Day 3: Thursday, March 23, 2000

Time (Hrs)	Activity
09:00~09:45	Parallel Programming Paradigms and Programming Models
10:00~10:45	HPCC Software: Debuggers and System Management Tools
10:45~11:15	**Tea break**
1:15~12:00	Performance Metrics and Scalability analysis
12:30~14:00	**Lunch**
14:00~14:45	HPCC Software: KSHIPRA and CDAC-MPI
15:00~18:00	**Hands-on Session (**Day 3): Conjugate Gradient method to solve matrix system of linear equations, Sparse Matrix-Vector Multiplication, Sample sort algorithm, Solution of poisson equation with dirichlet boundary conditions by finite difference and finite element method, Demonstration of HPCC software

Day 4: Friday, March 24, 2000

Time (Hrs)	Activity
09:00~09:45	Principles of Parallel Algorithms and Design – From Application Point of view
10:00~10:45	An Overview of Applications on PARAM 10000
11:00~12:00	Application Software: Finite Element Method for COMPosites (FEMCOMP) and PAMCRASH (Crash Simulation)
12:00~12:30	Demonstration of Application software **FEMCOMP**
12:30~14:00	**Lunch**
14:00~16:00	Open discussions and conclusions