Centre for Development of Advanced Computing
Schedule for Parallel Computing lectures for Advanced Course in Bio-Informatics (ACB-2002) at IICT, Hyderabad
HPC Module Coordinator: Dr.VCV.Rao (C-DAC, Pune)
December 30, 2002 (Monday)~ January 06, 2003 (Monday)

Day 1: December **30 (Monday)**

Time (Hrs)	Activity
10:00~11:00	Morning Session I : Overview of Serial Computing
11:30~13:00	Morning Session II : Introduction to Parallel Computing – Part I
14:00~15:00	Afternoon Session I: An Overview of Models of Parallel Computers
15:30~17:30	Afternoon Session II : Introduction to Hands-on Session

Day 2: December **31 (Tuesday)**

Time (Hrs)	Activity
10:00~11:00	Morning Session I : An Overview of Programming Paradigms
11:30~13:00	Morning Session II : Message Passing Model (MPI) – An Introduction
14:00~15:00	Afternoon Session I : Introduction to **Hands-on Session**
15:30~17:30	Afternoon Session II : Introduction to **Hands-on Session**

Day 3: January **01 (Wednesday)**

Time (Hrs)	Activity
10:00~11:00	Morning Session I: An Overview of PARAM 10000
11:30~13:00	Morning Session II: Message Passing Model (MPI) – Advanced Features
14:00~15:00	Afternoon Session I : Hands-on Session – Matrix Computations
15:30~17:30	Afternoon Session II : Hands-on Session – Matrix Computations

Day 4: January **02(Thursday)**

Time (Hrs)	Activity
10:00~11:00	Morning Session I: An overview of OpenMP – Shared Memory Programming
11:30~13:00	Morning Session II Performance and Scalability Analysis
14:00~15:00	Afternoon Session I: Hands-on Session – Matrix Computations
15:30~17:30	Afternoon Session II: Hands-on Session – Matrix Computations

Day 5: January **03(Friday)**

Time (Hrs)	Activity
10:00~11:00	Morning Session I: Application and System Benchmarks
11:30~12:30	Morning Session II: Case Study on Bio-Informatics Application

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January 05, 2003 (Sunday)~ January 07, 2003 (Tuesday)

Day 6: January 05, 2003 (Sunday)

13:00~14:00	**LUNCH**
14:00~16:00	**Hands-on Session**: Basic MPI programs in FORTRAN and C, How to write, compile and execute a simple MPI program.
16:00 ~ 16:30	**TEA BREAK**
16:30 ~ 18:00	**Hands-on Session**: Continued

Day 7: January 06, 2003 (Monday)

09:30~11:00	**Hands-on Session**: Basic MPI programs in FORTRAN and C, Examples on Point-to-Point and Collective communications and computations, Numerical Integration of π function.
11:00~11:30	**TEA BREAK**
11:30~13:00	**Hands-on Session**: Matrix-Vector multiplication algorithms, Matrix-Matrix multiplication algorithms; Infinity Norm of a matrix.
13:00~14:00	**LUNCH**
14:00~16:00	**Hands-on Session**: Basic OpenMP programs. Performance of selective application and system benchmarks (NAS, LINPACK) on PARAM 10000, Demonstration of visualization tools..
16:00 ~ 16:30	**TEA BREAK**
16:30 ~ 18:00	**Hands-on Session**: Continued