WORKSHOP ON HIGH PERFORMANCE COMPUTING

Organized by Centre for Development of Advanced Computing, Pune

Day 1

Time (Hrs)	**Lecture/ Hands-on Session**
09:30 -10:15	Overview of HPC
10:15 -11:-00	Insight into HPC Systems
	Tea Break -15 min
11:15 -13:00	Distributed Memory Parallelism with MPI Point to Point Communication
	Lunch Break -1hr
14:00 -16:00	Hands-on Session: Distributed Memory Parallelism with MPI Point to Point Communication
	Tea Break -15 min
16:15 -17:30	Hands-on Session: Distributed Memory Parallelism with MPI Point to Point Communication

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Day 2

Time (Hrs)	Lecture/Hands-on Session
09:30 -10:15	Installing and configuring user applications on Linux cluster • How to install applications from source code • Setting up of user's environment for parallel computing
10:15 -11:15	Distributed Memory Parallelism with MPI Collective Communication
	Tea Break -15 min
11:30 -12:00	Parallel Algorithmic Paradigms
12:00 -13:00	Case study: Parallelization of Matrix-Matrix Multiplication
	Lunch -1hr
14:00 -16:00	Hands-on Session: Parallel Programming using MPI Point to Point Communication (in FORTRAN and C)
	Tea Break -15 min
16:15 -17:30	Hands-on Session: Parallel Programming using MPI collective Communication (in FORTRAN and C)

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Day 3

Time (Hrs)	**Lecture/Hands-on Session**
09:30 -10:45	Shared Memory Parallelism with OpenMP
	Tea Break -15 min
11:00 -11:45	Case Study: Fast Fourier Transform
11:45 -12:30	Performance metrics, Scalability & Speed-up Analysis of codes
12:30 -13:00	Profiling and Analysis of codes (to identify opportunities for parallelism)
Lunch -1 hr	
.4:00 -16:00	Hands-on Session: Shared Memory Programming using OpenMP (in FORTRAN and C)
	Tea Break -15 min
16:15 -17:30	Hands-on Session: Shared Memory Programming using OpenMP (in FORTRAN and C)

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Day 4

Time (Hrs)	**Lecture/Hands-on Session**
09:30 – 10:45	Emerging Technologies in Advanced Computing:
10:45 -11:15	Introduction to cluster job schedulers and resource managers
	Tea Break -15 min
11:30 -12:00	Introduction to Grid Computing and Cloud Computing
12:00 -13:00	Case Study or Problem Discussion by workshop participants
14:00- 16.00	Hands-on Session: Parallel Programming using MPI and OpenMP APIs together
	Tea Break 15 min
16:15-17:30	Hands-on Session: Parallel Programming using MPI and OpenMP APIs together

भारतीय कृषि सांख्यिकी अनुसंधान संस्थान
(भा.कृ.अ.प.)
लाइब्रेरी एवेन्यू, पूसा, नई दिल्ली - 110012 (भारत)
Indian Agricultural Statistics Research Institute
(ICAR)
Library Avenue, Pusa, New Delhi-110012 (India)

Training-cum-Workshop
on
"Parallel Computing and High Performance Computing"
From
February 7-11, 2011 at C-DAC, Pune

1. Full Name: _____

2. Designation: _____

3. Sex (M/F): ☐

4. Date of birth ☐☐ ☐☐ ☐☐
(dd-mm-yy)

5. Present employer and address_____
Phone (off.) _____
Phone (Res.) _____
Fax _____
E-mail _____

6. Teaching/research/professional experience.

7. Academic records

Degree	Subject/ Discipline	Year	Class/ Div	University/ Institution
Ph.D. Master degree Bachelor degree				

(Please √ for column 9 and 11)

8. Working knowledge of Operating System Windows/ Linux / Unix/ Mac OS/ Sun OS Others _____

9. Working knowledge of RDBMS MS Access/SQL Server/ Oracle/ Ingres/ Sybase/MySQL Others _____

10. Working knowledge of web designing HTML/ VBScript/ JavaScript/CGI/ASP/ JSP
    Others _____

    Date: _____

    Place: _____
    Signature of the applicant

11. Recommendation of forwarding Institution:

Signature and designation of the sponsoring authority with seal

Date:_____

Place:_____