

Internal Workshop On
Scaling Applications on Many Core Processor Clusters with
GPU Accelerators & Co-processors (SamGac-2015)
Tentative Technical Programme

Jointly Organized by

Dept. of Metallurgical & Materials Engineering, IIT, Kharagpur &
Centre for Development of Advanced Computing (C-DAC), Pune

Venue : Dept. of Metallurgical & Material Engg. Dept, **Dates** : **August 01-02, 2015**

Contact by 29th July 2015: Prof. Sudipto Ghosh, Dept. of Metallurgical & Materials Eng., IIT-
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Day 1: August 01, 2015 (Saturday), Venue: Gargi Auditorium

8:45 AM ~ 9:00 AM: Registration	
9:00 AM ~ 9:15 AM	Welcome Address
9:30 AM ~ 10:15 AM	Lecture : Prog. on Multi-Core Systems (MPI, Threads, OpenMP) - Message Passing Cluster with Xeon Phi Co-processors : Application Perspective Speaker : C-DAC, Pune
10:30 AM - 10:45 AM	~ Coffee & Tea Break
1:00 PM -2:00 PM ~Lunch	
10:45 AM ~ 11:30 AM	Lecture : Prog. on Host Multi-Core Systems (MPI, Threads, OpenMP) of a Message Passing Cluster with GPU Devices - CUDA – NVIDIA GPUs Speaker : C-DAC, Pune
11:45 AM ~12:30 PM	Lecture & Lab Session : Prog. on Host Multi-Core Systems and Device GPUs - : GPU Programming – CUDA enabled NVIDIA GPUs : Speaker : VCV.Rao, C-DAC, Pune & Mr. Swapnajit, C-DAC, Pune
12:30 PM ~ 1:00 PM	Lab Session : An Overview of Lab Sessions / Codes on C-DAC web-site
1:00 PM - 2:00 PM ~ Lunch	
4:00 PM - 4:15 PM ~ Coffee & Tea Break	
2:00 PM ~ 2:45 PM	Invite Talk
3:00 PM ~ 3:45 PM	Lecture & Lab Session : Mixed Programming (MPI-OpenMP, MPI-TBB, MPI-Pthreads); Basic Prog. on Host-CPU with CUDA enabled NVIDIA GPUs; Prog. on Matrix Computations on Host CPUs and Multi-GPUs; Speaker : VCV.Rao, C-DAC, Pune & Mr. Swapnajit, C-DAC, Pune
4:30 PM – 5:15 PM	Lecture : An Overview of Scaling applications on Clusters with different Accelerators Speaker : VCV.Rao, C-DAC, Pune & Mr. Swapnajit, C-DAC, Pune
5:30 PM ~ 6:30 PM	Lecture & Lab Session : Mixed Programming application kernels (MPI-OpenMP, MPI-TBB, MPI-Pthreads); Basic Prog. on Host-CPU with CUDA enabled NVIDIA GPUs; Basic Prog. on Matrix Comps on NVIDIA GPUs;

Day 2: August 02, 2015 (Sunday) Venue: Takshashila Building

9:30 AM ~ 10:15 AM	Interactive Session : Prog. on Message Passing Clusters –Tuning and Performance on Multi-core Systems – Intel Xeon Phi Co-processors :Part-I Speaker : C-DAC, Pune
10:45 AM ~ 12:30 PM	Lecture and Lab Session Prog. on Message Passing Clusters-Tuning and Performance on Multi-core Systems – Intel Xeon Phi Co-processors: and GPU Accelerators - Use of Libraries
12:45 PM – 1:00 PM	Closing Session
10:30 AM - 10:45 AM ~ Coffee & Tea Break	
1:00 PM -2:00 PM ~Lunch	