

WHPC-2015
Three Days Workshop On High Performance Computing
Tentative Technical Programme

Jointly Organized by

Department of Applied Mathematics Indian School of Mines (ISM), Dhanbad &
 Centre for Development of Advanced Computing (C-DAC), Pune

Venue : Golden Jubilee Lecture Theatre, ISM Dhanbad, **Date :** July 29-31, 2015

Day 1: July 29, 2015 (Wednesday)

8:30 AM ~ 9:00 AM: Registration	
9:30 AM ~ 10:30 AM	Inaugural Function
10:30 AM - 10:45 AM ~ Coffee & Tea Break	1:00 PM -2:00 PM ~Lunch
10:45 AM ~ 11:30 AM	Class-room Lecture-1 : Prog. on Host Multi-Core Systems (MPI, Threads, OpenMP) of a Message Passing Cluster with GPUs: Part-I Speaker : C-DAC, Pune
11:30 AM ~ 12:15 PM	Invited Talk (Academic): Speaker : To be decided
12:15 PM ~ 12:45 PM	Class-room Lecture-2 : Prog. on Host Multi-Core Systems (MPI, Threads, OpenMP) of a Cluster with Xeon Phi coprocessors : Part-II Speaker : VCV.Rao, C-DAC, Pune & Mr. Swapnajit, C-DAC, Pune
12:45 PM ~ 1:00 PM	Lab Session : An Overview of WHPC-2015 Laboratory Session (Day-1) Speakers : WHPC-2015 Organizing Committee
1:00 PM - 2:00 PM ~ Lunch	4:00 PM - 4:15 PM ~ Coffee & Tea Break
2:00 PM ~ 3:00 PM	Lab. Session: Mixed Programming (MPI-OpenMP, MPI-TBB, MPI-Pthreads); Basic Prog. on Host-CPU with CUDA enabled NVIDIA GPUs; Basic Prog. on Matrix Computations on Host CPUs and Multi-GPUs;
3:00 PM – 4:00 PM	Classroom Lecture-3 & Lab session: An Overview of GPGPU – Prog. Environment & Introduction to CUDA enabled NVIDIA GPUs- OpenACC Speaker : C-DAC, Pune
4:15 PM ~ 5:00 PM	Invited Talk (Academic): Speaker : To be decided
5:15 PM ~ 6:30 PM	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 Computations on NVIDIA GPUs;

Day 2: July 30, 2015 (Thursday)

9:00 AM ~ 9:45 AM	Classroom Lecture-1: Prog. on Message Passing Clusters –Tuning and Performance on Multi-core Systems – Intel Xeon Phi Co-processors :Part-I Speaker : C-DAC, Pune
9:45 AM ~ 10:30 AM	Classroom Lecture-2: Prog. on Message Passing Clusters-Tuning and Performance on Multi-core Systems – Intel Xeon Phi Co-processors: Part-II Speaker : C-DAC, Pune
10:30 AM - 10:45 AM ~ Coffee & Tea Break	1:00 PM -2:00 PM ~Lunch

Day 2: July 30, 2015 (Thursday)

10:45 AM ~ 11:30 AM	Invited Talk (Academic): Speaker
10:30 AM - 10:45 AM ~ Coffee & Tea Break	1:00 PM -2:00 PM ~Lunch

11:45 AM ~ 12:45 PM	Classroom Lecture-3 & Lab Session : Tuning and Performance Issues of NLA Kernels —Data parallel Apps using OpenACC; Performance of NLA (MAGMA) & CUBLAS on CUDA enabled NVIDIA GPUs Speaker : C-DAC, Pune
12:45 PM ~ 1:00 PM	Lab Session : An Overview of WHPC-2015 Laboratory Session (Day-2) Speakers : WHPC-2015 Organizing Committee
1:00 PM - 2:00 PM ~ Lunch	
4:00 PM - 4:15 PM ~ Coffee & Tea Break	
2:00 PM ~ 4:00 PM	Lab. Session: Programming using CUDA enabled NVIDIA GPUs- CUDA SDK tools; Examples programs Pthreads, OpenMP on host-CPU; Use of OpenACC Compiler Pragmas; NLA Alg. & OpenACC APIs on GPUs
4:15 PM ~ 5:00 PM	Invited Talk (Academic): Speaker : To be decided
5:15 PM ~ 6:30 PM	Lab. Session: Performance of NLA Kernels on CUDA GPUs; - CUDA memory Access; Tuning & Performance on Multi-CUDA enabled NVIDIA-GPUs; Demonstration of NLA Algorithms (MAGMA, BLAS); OpenACC APIs.; Programs on Multi-core systems with Intel Xeon Phi Co-processors

Day 3: July 31, 2015 (Friday)

9:00 AM ~ 9:45 AM	Classroom Lecture-1: Performance Issues of Application Kernels (Partial Differential Equations (PDEs) by FDM/FEM on MPI based Clusters) on Message Passing Cluster with different accelerators Speaker : C-DAC, Pune
9:45 AM ~ 10:30 AM	Invited Talk (Academic): Speaker : To be decided
10:30 AM - 10:45 AM ~ Coffee & Tea Break	
1:00 PM -2:00 PM ~Lunch	
10:45 AM ~ 11:30 PM	Invited Talk (Academic): Speaker : To be decided
11:30 AM ~ 12:30 PM	Invited Talk : An Overview of PARAM YUVA-II and Application Kernels on Message Passing Clusters : Case Study – PARAM YUVA-II Speaker: C-DAC, Pune
12:30 PM ~ 1:00 PM	Lab Session : An Overview of WHPC-2015 Laboratory Session (Day-3) Speakers : WHPC-2015 Organizing Committee
1:00 PM - 2:00 PM ~ Lunch	
2:00 PM ~ 3:00 PM	Classroom Lecture-2: Introduction to Heterogeneous Programming on GPUs-OpenCL Speaker : C-DAC, Pune
3:00 PM ~ 5:00 PM	Lab. Session: Performance of Application Kernels – MPI-GPUs, MPI-OpenMP, Performance on Multi-CUDA enabled NVIDIA-GPUs; Application Kernels on MPI Based Cluster with Intel Xeon Phi Systems
5:00 PM - 5:30 PM	WHPC-2015 Workshop Feedback & Closure
5:30 PM - 6:00 PM	
High Tea & Networking	