

Russian-German School
On Parallel Computing and High Performance Computer Systems
Week 1, Beginners
2008, Novosibirsk, Akademgorodok, Russia

Monday, 25.08.2008

9.00 – 10.00	Registration
10.00 – 10.30	Opening
10.30 – 12.00	Introduction to PC-Cluster Hardware
11.30 – 12.00	Coffee Break
12.30 – 13.00	Parallel Programming Models
13.00 – 14.30	Lunch
14.30 – 15.00	Parallel Programming Models (cntd.)
15.00 – 16.30	Introduction to MPI (I)
16.30 – 17.00	Coffee Break
17.00 – 18.00	Practical

Tuesday, 26.08.2008

9.30 – 11.00	Introduction to MPI (II)
11.00 – 11.30	Coffee Break
11.30 – 13.00	Practical
13.00 – 14.30	Lunch
14.30 – 16.00	Introduction to MPI (III)
16.00 – 16.30	Coffee Break
16.30 – 17.30	Practical

Wednesday, 27.08.2008

9.30 – 11.00	Introduction to Dune (I)
11.00 – 11.30	Coffee Break
11.30 – 13.00	Practical
13.00 – 14.30	Lunch
14.30 – 16.00	Introduction to Dune (II)
16.00 – 16.30	Coffee Break
16.30 – 17.30	Practical

Thursday, 28.08.2008

9.30 – 11.00	Introduction to OpenMP
11.00 – 11.30	Coffee Break
11.30 – 13.00	Practical
13.00 – 14.30	Lunch
14.30 – 16.00	Verifying an OpenMP parallelization with the Intel Thread Checker
16.00 – 16.30	Coffee Break
16.30 – 17.30	Performance Tuning and OpenMP

Friday, 29.08.2008

9.30 – 11.00	Introduction to Dune (III)
11.00 – 11.30	Coffee Break
11.30 – 13.00	Practical
13.00 – 14.30	Lunch
14.30 – 15.30	Introduction to Dune (IV)
15.30 – 16.00	Coffee Break
16.30 – 18.00	Practical

Student research seminar “Distributed and High Performance Computing”

August 30 2008, Novosibirsk, Akademgorodok

The seminar agenda includes presentations on the practical aspects of high performance computing in the institutes of the Siberian Branch of the Russian Academy of Sciences and presentations of the participants of the school on the subjects related to their research. The themes of the seminar are not restricted to the issues of parallel programming and high performance computing.

The participants of the school are invited to give presentations on the subjects such as

- parallel and high performance computations,
- theory of parallel computational processes,
- tools for parallel and high performance computing,
- practice of application of mathematical modelling,
- computational mathematics.

The Program Committee of the school reserves the right of final decision on the program. One or two page of an extended abstract of the presentations should be submitted by August 1. Extended abstracts of the accepted presentations will be published in the proceedings. Short abstracts will be published in “Computational Technologies”.

Seminar chairs: academician Y.I. Shokin, professor M.P. Fedoruk

Russian-German School
On Parallel Computing and High Performance Computer Systems
Week 2, Advanced
2008, Novosibirsk, Akademgorodok, Russia

Monday, 1.09.2008

9.00 – 10.00	Registration
10.00 – 11.30	Supercomputer Technology: contemporary state and prospects
11.30 – 12.00	Coffee Break
12.00 – 13.00	Grid Technologies: an Overview
13.00 – 14.30	Lunch
14.30 – 16.00	MPI and OpenMP: current versions and recent developments
16.00 – 16.30	Coffee Break
16.30 – 17.30	Practical: Preparation of user Certificates

Tuesday, 2.09.2008

9.30 – 10.00	MPI-2 Overview
10.00 – 11.00	MPI-2 One-sided Communication
11.00 – 11.30	Coffee Break
11.30 – 13.00	MPI-2 Parallel File I/O
13.00 – 14.30	Lunch
14.30 – 16.00	Debugging and Performance analysis
16.00 – 16.30	Coffee Break
16.30 – 17.30	Practical

Wednesday, 3.09.2008

9.30 – 11.00	Introduction to Unicore
11.00 – 11.30	Coffee Break
11.30 – 13.00	Practical (Unicore)
13.00 – 14.30	Lunch
14.30 – 16.00	Single Processor Performance Optimization (Küster, Video Conference)
16.00 – 16.30	Coffee Break
16.30 – 17.30	Practical

Thursday, 4.09.2008

9.30 – 11.00	Parallelization of Implicit and Explicit iterative solvers
11.00 – 11.30	Coffee Break
11.30 – 13.00	Domain Decomposition Techniques
13.00 – 14.30	Lunch
14.30 – 16.00	Introduction to the Globus Toolkit
16.00 – 16.30	Coffee Break
16.30 – 17.30	Practical (GTK4)

Friday, 5.09.2008

9.30 – 10.00	Grid usage: pitfalls and hints
10.00 – 10.30	Coffee break
10.30 – 12.00	Practical (Globus Contd)
12.00 – 12.30	Workshop Closing