

**X German-Russian Young Scientists' School on
Parallel Programming and High Performance Computing**

Novosibirsk, Akademgorodok, September 09 – 20

Monday, September 09

09:30 Registration

10:30 School opening

11:00 *Parallel hardware architectures and Supercomputing technology (I)*

12:30 Lunch

14:00 *Parallel hardware architectures and Supercomputing technology (II)*

15:30 Coffee break

16:00 *Parallel hardware architectures and Programming Models*

17:30 End

Tuesday, September 10

10:00 *OpenMP: Introduction and Execution model*

11:30 Coffee break

12:00 *OpenMP: Worksharing directives*

13:00 Lunch

14:00 *OpenMP: Data environment and Combined constructs*

15:30 Coffee break

16:00 *OpenMP: Pitfalls and Optimization problems*

17:30 End

Wednesday, September 11

10:00 *MPI: Overview*

11:30 Coffee break

12:00 *MPI: Process Model*

13:00 Lunch

14:00 *MPI: Point-to-Point Communication*

15:30 Coffee break

16:00 *MPI: Non-Blocking Communication*

17:30 End

Thursday, September 12

- 10:00** *MPI: Collective communication*
- 11:30 Coffee break
- 12:00** *MPI: Error handling*
- 13:00 Lunch
- 14:00** *MPI: Groups & Communicators, Environment management*
- 15:30 Coffee break
- 16:00** *MPI: Virtual topologies*
- 17:30 End

Friday, September 13

- 10:00** *MPI: One-sided communication*
- 11:30 Coffee break
- 12:00** *MPI: Shared memory One-sided communication*
- 13:00 Lunch
- 14:00** *Participant's presentations*
- 16:30 End

**X German-Russian Young Scientists' School on
Parallel Programming and High Performance Computing**

Novosibirsk, Akademgorodok, September 09 – 20

Monday, September 16

- 10:00** *Advanced MPI: Derived datatypes*
- 11:30 Coffee break
- 12:00** *Advanced MPI: Parallel file I/O*
- 13:00 Lunch
- 14:00** *Advanced MPI: MPI and Threads*
- 15:30 Coffee break
- 16:00** *Advanced MPI: Process management and Other MPI features*
- 17:30 End

Tuesday, September 17

- 10:00** *Program optimization for single processor performance (I)*
- 11:30 Coffee break
- 12:00** *Program optimization for single processor performance (II)*
- 13:00 Lunch
- 14:00** *Program optimization for single processor performance (III)*
- 15:30 Coffee break
- 16:00** *Program optimization for single processor performance (IV)*
- 17:30 End

Wednesday, September 18

- 10:00** *Tools for Performance Analysis (I)*
- 11:30 Coffee break
- 12:00** *Tools for Performance Analysis (II)*
- 13:00 Lunch
- 14:00** *Tools for Performance Analysis (III)*
- 15:30 Coffee break
- 16:00** *Tools for Performance Analysis (IV)*
- 17:30 End

Thursday, September 19

- 10:00** *Hybrid Programming on Modern Clusters*
- 11:30 Coffee break
- 12:00** *Hackathon problems presentation*
- 13:00 Lunch
- 14:00** *Hackathon (I)*
- 15:30 Coffee break
- 16:00** *Hackathon (II)*
- 17:30 End

Friday, September 20

- 10:00** *Hackathon (III)*
- 11:00 Coffee break
- 11:30** *Hackathon results presentations*
- 12:30** **School closing**
- 13:00 End