ЛАБОРАТОРИЯ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ

Thursday, February 5, 2015 at 14.00
Conference-hall

The seminar of the HybriLIT team on heterogeneous computing

The seminar is devoted to the use of the heterogeneous cluster HybriLIT that is a computation component of the Multifunctional center for data storage, processing and analysis of the Laboratory of information technologies JINR. The reporters will present detailed information about the structure of the heterogeneous cluster, software and services for users. The seminar will also cover the development of applications on the basis of modern parallel programming technologies that allow make the best use of computational components of the cluster HybriLIT; the examples of the use of the cluster in solving applied tasks are also provided.

14.00 **V. Korenkov.** Heterogeneous cluster HybriLIT as a new computation component of the Multifunctional center for data storage, processing and analysis of the Laboratory of information technologies JINR.

14.20 **A. Perevozchikov.** IBM POWER8 as the main part of a new generation HPC hybrid systems.

15.05 **D. Belyakov, M. Vala, <u>M. Matveev</u>.** Heterogeneous cluster HybriLIT. Software.

15.20 **L. Valova, V. Galaktionov, D. Golub, T. Zaikina, M. Kirakosyan, A. Prikhodko, <u>S. Torosyan</u>.** Information support of the users of the heterogeneous cluster HybriLIT.

15.35 **Coffee break**

15.55 **<u>E. Aleksandrov</u>, D. Belyakov.** Test of the components of the cluster HybriLIT by means of Linpack benchmark package.

16.15 **M. Zuev, D. Podgainy, <u>O. Streltsova</u>.** Parallel programming technologies for heterogeneous computing systems.

16.35 **A. Ayriyan.** Brief introduction to OpenCL. Examples of use in scientific computations.

16.55 **T. Sapozhnikova.** Examples of use of MPI technology on the cluster HybriLIT.

17.10 **E. Zemlyanaya.** On the numerical study of some physical systems with the use of parallel optimization.

17.30 **E. Aleksandrov, D. Belyakov, E. Zemlyanaya, P. Zrelov, <u>M. Zuev</u>, D. Podgainy, O. Streltsova.** Test of the heterogeneous cluster HybriLIT by means of GIMM_FPEIVE software package.

17.45 **A. Trunin.** Hybrid computing in tasks on QCD in lattice.