ЛАБОРАТОРИЯ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ

Tuesday 23 April 2019, 11.00
Room 310

Bashashin M.V.

The use of parallel computing technologies for the high performance numerical study of models of some physical systems

For some models of physical systems, using MPI and (or) OpenMP technologies, parallel computational schemes and computer programs have been developed that significantly decrease the time of numerical research in computations on multiprocessor (multi-core) computing architectures, including the HybriLIT platform. Numerical results are presented to confirm the efficiency of parallel implementations of: 1. calculating the current-voltage characteristics in the long Josephson junctions systems; 2. simulating the magnetization reversal effect in φ0-junctions in a wide range of parameters; 3. construction of the microscopic double folding potential.