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Logically simple algorithms — the way to success of exaflops calculation.

In the presentation is devaluated to the problems of using high performance computers with extreammassive parallelism. Only logically simple algorithms gives the opportunity for their effective using. One of the way of constructing such kind of the algorithms is to use of connection between kinetic and hydrodynamic description of continuum media. It is demonstrated the results of simulation of some 3D magnetogasdynamics problem; using for approximation the mesh with more then  $10^9$  nodes.