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Analysis of performance of numerical simulation of physical processes in the system of long Josephson junctions using technology of parallel computation OpenMP

Simulation of the IV - characteristics of the system of coupled Josephson junctions leads to the need of numerical solution of respective system of large number of nonlinear partial differential equations. An actual problem is to decrease the numerical simulation time, which can be done by the using of modern parallel programming technologies.

We have calculated the IV-characteristics of the system of long Josephson junctions in parallel mode using the OpenMP technology. Analysis of the effect of numerical parameters on the computational time is carried out.

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