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Modeling the process of executing an evolutionary algorithm on the desktopgrid

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The topic of the presented report is various approaches to modeling the process of solving optimization problems using the desktopgrid [1]. The report summarizes the practical experience of performing computations on local infrastructures and on voluntary computing projects. The creation of preliminary models of the computational process will allow to avoid many systemic complexities in the process of performing computations in practice.

Systemic effects that affect computational performance will be considered [2]. The report will propose ways to quantify the efficiency and productivity of the evolutionary algorithm on the desktopgrid [3]. Approaches to the compilation of mathematical and simulation models and methods of calculating metric characteristics within the framework of the proposed approaches will be considered.

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2. Khrapov N.P. Analysis of the performance reasons for adapting the evolutionary algorithm to voluntary computing systems. Proc of the International Congress on Modern Problems of Computer and Information Sciences, 2019, pp. 21-26 (in Russian).
3. Khrapov N.P. Metrics of efficiency and productivity when using the evolutionary algorithm on desktopgrid. Proc. ISP RAS, vol. 32, issue 4, 2020. pp. 133-140 (in Russian). DOI: 10.15514/ISPRAS-2020-32(4)-9

Summary

Author: KHRAPOV, Nikolay (Pavlovich)

Presenter: KHRAPOV, Nikolay (Pavlovich)

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