MESHCHERYAKOV LABORATORY OF INFORMATION TECHNOLOGIES

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MLIT Conference Hall
Online seminar via Webex

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Methods and Algorithms for Solving Resource Optimization Problems in Non-Stationary Distributed Heterogeneous Computing Environments

(based on the doctoral thesis)

The talk discusses the opportunities and challenges of mitigating uncertainty in cloud computing. The structure of uncertainties arising, in particular, from performance and bandwidth changes, virtualization, and elasticity, is analyzed. The uncertainty associated with workload properties, the dynamism of the execution context and the uncertainty related to such important aspects as privacy, security, and availability are also described.
Planning challenges for different scenarios of HPC, Grid and Cloud Infrastructures are addressed. Some theoretical and experimental results are provided, and static, dynamic and adaptive approaches are considered. The challenges of resource optimization in the presence of nonstationarity, ranging from resource heterogeneity handling, the dynamic behavior of the execution context, as well as the uncertainties associated with cloud parameters, are discussed.

More information on the seminar and the link to connect are available at Indico:
https://indico-hlit.jinr.ru/event/271/