Pozývame Vás na

SEMINÁR ÚI SAV,

ktorý sa bude konať v utorok 27.11.2018 o 14.00 hod.
v zasadačke č. 102

Program:

Prof. Anatoliy Doroshenko
Formal and Adaptive Methods for Developing Efficient Parallel Programs

Efficiency in many cases is understood as the program speed (minimal time of execution). The problem of building efficient programs for multiprocessor architectures can be successfully solved with the help of tools for automated design and programming to cover all the stages of program life cycle, beginning from writing primary specifications to generating executable code. In this presentation, the two complementary approaches for the automation are presented. The first is the high-level formal models, methods and tools for designing parallel programs, based on the algebra of algorithms and the term rewriting paradigm. Another is autotuning programs for a target architecture in order to reduce overhead costs and to minimize running time.

Dr. Oleksii Ignatenko
Game-theoretic approach to the problem of scheduling in parallel computing models

Modern scientific problems require significant computing resources, so the problem of resources optimization in multiprocessor environments is very important. We will focus on cloud systems as one of the most recent and promising fields of high-performance computing. Cloud computing systems operate in complex heterogeneous environments. The allocation algorithms may contain defects and inefficiency and this can lead to a significant increase in processing time, that is why cloud computing require efficient algorithms providing flexible and stable allocation of resources. The problem is in unfair and uneven access to resources, caused by heterogeneity of users and their tasks where each user is rational agent that tries to increase its share of resources. This could bring the system to the inefficient equilibrium., so a key element of cloud systems are efficient algorithms for load distribution – schedulers and brokers, providing services to users. In lecture we consider game-theoretic approach to the problem of scheduling and allocation of computing resources in dynamic heterogeneous environment with many competitive users.

Tešíme sa na stretnutie s Vami pri šálke kávy alebo čaju

Ing. Ivana Budinská, PhD.
riaditeľka ÚI SAV