

21
мая
четверг

**Коллоквиум
факультета
компьютерных наук
НИУ ВШЭ**

Два Доклада!

Сюзанна Граф

**VERIMAG
Grenoble**

**Knowledge-based
Verification
and Construction
of Distributed
and Constrained
Systems**

16:40-18:00

We explore here the problem from the knowledge perspective: a process can decide to execute a local action when it has the knowledge to do so. We discuss typical knowledge atoms, useful for expressing local enabling conditions with respect to different notions of correctness, as well as different means for obtaining knowledge and for representing it locally in an efficient manner.

Our goal is to use such a knowledge-based representation of the distribution problem for either deriving distributed implementations automatically from global specifications on which some constraint is enforced – a difficult problem – or for improving the efficiency of existing protocols by exploiting local knowledge. We also argue that such a knowledge-based presentation helps achieving the necessary correctness proofs.

**Константин
Макарычев**

Microsoft Research

**Beyond Worst Case
Analysis of Graph
Partitioning
Algorithms**

18:30-20:00

Many combinatorial optimization problems are much simpler in practice than in the worst-case. One of the challenges in the area of approximation algorithms is to explain this phenomenon and to design algorithms that work well in real-life. In this talk, I will first discuss different ways of modelling “real-life” instances. Then, I will present a new semi-random semi-adversarial model for graph partitioning problems, a planted model with permutation-invariant random edges (PIE). This model is much more general than stochastic models considered previously. Finally, I will describe a “constant factor” approximation algorithm for finding the minimum balanced cut in graphs from this model.

**21 мая, 16:40-20:00
Кочновский проезд, 3
лекционный зал Декарт, 3 этаж**

**Заказать пропуск на проход в здание
можно на computerscience@hse.ru**

