Hocschule Bonn-Rhein-Sieg

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1 Why simulated annealing performs better that hill climbing?

The simulated annealing method can avoid situation when hill climbing usually gets stuck. This happens when goal function has a "plato". Instead of hill climbing, it can move not only in direction of the highest slope, but also can move randomly to find maximum.

2 Hill climbing usually finds only local maximums. How can it be modified to find global maximum?

In order to find a global maximum, hill climbing can be started from different starting points that were generated randomly. The more random starting points were taken, the more probability that the maximum of all found maximums is the global one.

3 What types of constraints exist in constraint satisfaction problems ?

There are 4 main types of constraints:

- unary constraint need to be satisfied by one variable;

- binary constraint involve 2 variables;
- preference constrain set the cost to variable assignment;
- high-order constraints involves more than 3 variables at the same time.