

Randomized approximation algorithms for TSP and its generalization

Mikhail Khachay

Institute of Mathematics and Mechanics of Russian Academy of Science, Ural Branch, Ekaterinburg

Abstract. In this lecture, we continue the discussion of approximation algorithms for the Traveling Salesman Problem and some of its generalizations. Unless the previous one, this lecture aims to introduce the randomized approximation and asymptotically optimal algorithms for these problems. The asymptotically optimal algorithms seem to be very surprising especially in the context of the well known 'curse of dimensionality' conjecture and bridge a promising connection between two fast growing fields of theoretical computer science, combinatorial optimization and statistical learning theory.