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**APPROXIMABILITY OF THE OPTIMAL ROUTING PROBLEM
IN FINITE-DIMENSIONAL EUCLIDEAN SPACES**

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M. Yu. Khachai, R. D. Dubinin

The capacitated vehicle routing problem (CVRP) is a classical combinatorial optimization problem with a wide range of applications in operations research. Since the CVRP is NP-hard even in a finite-dimensional Euclidean space, special attention is traditionally paid to the issues of its approximability. A major part of the known results concerning approximation algorithms and polynomial-time approximation schemes (PTAS) for this problem are obtained for its particular instance on the Euclidean plane. In the present paper we show that the approach to the development of a PTAS in the planar problem with a single depot proposed by Haimovich and Rinnooy Kan in 1985 can be effectively applied in a more general case, for example, in spaces of arbitrary fixed dimension and for an arbitrary number of depots.

Keywords: optimal routing, CVRP, approximability, EPTAS.

M. Yu. Khachai, Dr. Phys.-Math. Sci., Prof., Krasovskii Institute of Mathematics and Mechanics, Ural Branch of the Russian Academy of Sciences, Yekaterinburg, 620990 Russia; Ural Federal University, Yekaterinburg, 620002 Russia; Omsk state technical University, Omsk, 644050 Russia, e-mail: mkhachay@imm.uran.ru .

R. D. Dubinin, student, Ural Federal University, Yekaterinburg, 620002 Russia
e-mail: romandubinin94@gmail.com .

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