

[Ageev, A. A.](#); [Gimadi, Eh. Kh.](#); [Kurochkin, A. A.](#)

A polynomial algorithm for solving the facility location problem on a chain network with identical plant production capacities. (Russian) [Zbl 1249.90295](#)

[Diskretn. Anal. Issled. Oper.](#) 16, No. 5, 3-18 (2009).

Summary: A facility location problem with uniform capacities on a chain network is considered. Previously, A. A. Ageev has shown that this problem can be solved in $O(m^5n^2 + m^3n^3)$ time, where m is the number of facilities and n is the number of clients. We present a modified algorithm that reduces the time complexity to $O(m^4n^2)$.

MSC:

[90C35](#) Programming involving graphs or networks

[90B80](#) Discrete location and assignment

Cited in **3** Documents

Keywords:

facility location; uniform capacities; path graph; polynomial-time algorithm