

[Ageev, A. A.](#); [Sviridenko, M. I.](#)

Pipage rounding: a new method of constructing algorithms with proven performance guarantee. (English) [Zbl 1084.90029](#)

J. Comb. Optim. 8, No. 3, 307-328 (2004).

Summary: The paper presents a general method of designing constant-factor approximation algorithms for some discrete optimization problems with assignment-type constraints. The core of the method is a simple deterministic procedure of rounding of linear relaxations (referred to as pipage rounding). With the help of the method we design approximation algorithms with better performance guarantees for some well-known problems including MAXIMUM COVERAGE, MAX CUT with given sizes of parts and some of their generalizations.

MSC:

[90C09](#) Boolean programming
[90C27](#) Combinatorial optimization
[68W25](#) Approximation algorithms

Cited in **3** Reviews
Cited in **33** Documents

Keywords:

Approximation algorithm; performance guarantee; linear relaxation; rounding technique; maximum coverage; max cut

Full Text: [DOI](#)