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Refinement of estimates of the convergence rate for the method of random search. (Russian)

Zbl 0589.90061

Mat. Issled. 89, 18-23 (1986).

The rate of convergence of a random search method is studied for the problem of minimizing the quadratic form $f(x) = ax_1^2 + x_2^2 + x_3^2$, where $0 < a < 1$ and the direction is chosen as a realization of a vector uniformly distributed on the surface of the three dimensional unit ball and the step size is found in an optimal way. For small values of a , comparisons of numerical results are given.

Reviewer: [J.Dupačova](#)

MSC:

- [90C20](#) Quadratic programming
- [65K10](#) Numerical optimization and variational techniques
- [90C99](#) Mathematical programming
- [65K05](#) Numerical mathematical programming methods

Keywords:

[rate of convergence](#); [random search](#); [quadratic form](#)

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