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**Large-scale active-set box-constrained optimization method with spectral projected gradients.** (English) [Zbl 1031.90012](#)

[Comput. Optim. Appl.](#) 23, No. 1, 101-125 (2002).

Summary: A new active-set method for smooth box-constrained minimization is introduced. The algorithm combines an unconstrained method, including a new line-search which aims to add many constraints to the working set at a single iteration, with a recently introduced technique (spectral projected gradient) for dropping constraints from the working set. Global convergence is proved. A computer implementation is fully described and a numerical comparison assesses the reliability of the new algorithm.

**MSC:**

[90C06](#) Large-scale problems in mathematical programming

[90C52](#) Methods of reduced gradient type

Cited in **66** Documents

**Keywords:**

[box-constrained minimization](#); [numerical methods](#); [active-set strategies](#); [Spectral Projected Gradient](#)

**Software:**

[SPG](#); [TRON](#)

**Full Text:** [DOI](#)