

**Bertsekas, Dimitri P.**

**A note on error bounds for convex and nonconvex programs.** (English) Zbl 1040.90546  
Comput. Optim. Appl. 12, No. 1-3, 41-51 (1999).

Summary: Given a single feasible solution  $x_F$  and a single infeasible solution  $x_I$  of a mathematical program, we provide an upper bound to the optimal dual value. We assume that  $x_F$  satisfies a weakened form of the Slater condition. We apply the bound to convex programs and we discuss its relation to Hoffman-like bounds. As a special case, we recover a bound due to *O. L. Mangasarian* [Math. Program. 83A, 187–194 (1998; [Zbl 0920.90119](#))] on the distance of a point to a convex set specified by inequalities.

**MSC:**

[90C31](#) Sensitivity, stability, parametric optimization  
[90C25](#) Convex programming  
[49K40](#) Sensitivity, stability, well-posedness

Cited in **2** Documents

**Keywords:**

convex programming; optimization duality; error bounds

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