

# Absolute Minimizer in Convex Programming by Exponential Penalty

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**Abstract:** We consider a nonlinear convex program. Under some general hypotheses, we prove that approximate solutions obtained by exponential penalty converge toward a particular solution of the original convex program as the penalty parameter goes to zero. This particular solution is called the absolute minimizer and is characterized as the unique solution of a hierarchical scheme of minimax problems.

**Keywords:** Convexity, minimax problems, penalty methods, nonuniqueness, optimal trajectory, convergence

**Classification (MSC2000):** 90C25, 90C31

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