

### 集值优化强有效解的广义二阶锥方向导数刻画

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### Characterizations on strongly efficient solutions of set-valued optimization with generalized second-order cone-directed derivatives

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- 摘要
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**摘要** 在实赋范线性空间中考虑集值优化问题的强有效性. 借助Henig扩张锥和基泛函的性质, 利用广义二阶锥方向相依导数, 得到受约束于集值映射的优化问题, 取得强有效元的二阶最优性必要条件. 当目标函数为近似锥-次类凸映射时, 利用强有效点的标量化定理, 得到集值优化问题, 取得强有效元的二阶充分条件.

**关键词:** 强有效性 广义二阶锥方向相依导数 集值优化

**Abstract:** The strong efficiency for set-valued optimization is considered in real normed spaces. With the help of the properties of Henig dilating cone and base functional, by applying generalized second-order cone-directed contingent derivatives, a second-order optimality necessary condition is established for a pair to be a strongly efficient element of set-valued optimization whose constraint condition is determined by a set-valued mapping. When objective function is nearly cone-subconvexlike, with the scalarization theorem for a strongly efficient point an optimality sufficient condition is also derived for a pair to be a strongly efficient element of set-valued optimization.

**Keywords:** strong efficiency, generalized second-order cone-directed contingent derivative, set-valued optimization

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