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Scalarization in Ordered Sets*

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Abstract

In this work, a general approach to deal with the scalarization of binary relations on arbitrary sets is introduced. It focuses on simple properties that relate the sublevel sets of the scalarization mappings with the sets of points that "improve" a nominal point in the sense of the binary relation. Several examples in well-known optimization problems are shown in order to illustrate the effectiveness of the obtained results.

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