Generalization of the Concept of Motzkin Decomposable Closed Convex Sets

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A set is called Motzkin decomposable when it can be expressed as the Minkowski sum of a compact convex set with a closed convex cone. In this talk we shall present several generalizations of this concept. We consider the so-called Motzkin predecomposable sets, OM decomposable sets and weakly Motzkin predecomposable sets, i.e., sets which are sum of a compact convex set with a convex cone, sum of an open bounded convex set with a convex cone, and sets which are Minkowski sum of a bounded convex set with a convex cone, respectively. Necessary and sufficient conditions, characterizing these sets are found and discussed.

References


