

# Aggregated distance functions and their application in image processing

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## Abstract

In this paper we propose a new method for construction of distance functions and metrics, by applying aggregation operators on some given distance functions and metrics. For some types and examples of aggregation operators we analyze which properties of the given distance functions and metrics are preserved by such construction. We also present one possible application of the distance functions constructed in such way in image segmentation by fuzzy c-means algorithm. Other similar applications in image processing are also possible.

**Keywords:** Distance function, Metric, Aggregation operator, Image clustering, Fuzzy c-means algorithm

MSC 2010: 51K05, 28A75, 54E25, 47S40, 62H30