MUTLIPLICATIVE STRUCTURE ON VALUATIONS ON CONVEX SETS

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Finitely additive measures on convex compact sets are called valuations; they have been studied for a long time in convexity. Valuations continuous in the Hausdorff metric play an important role in the theory of valuations and its applications. For the space of continuous translation in- variant valuations we define a dense subspace of smooth valuations. We introduce a canonical multiplicative structure on smooth valuations and describe its properties and examples. If time permits we outline applications of the product to integral geometry.