Ion Chițescu, ***Parametric Continuity of Choquet and Sugeno Integrals***

Abstract

We consider a fixed probability μ. For any $\lambda \in (-1, \infty)$, we denote by $m(\lambda, \mu)$ the λ-Sugeno measure generated by μ. For a fixed measurable set A, the continuity of the map $\lambda \mapsto \int_A f dm(\lambda, \mu)$ is proved, where the integral is either Choquet or Sugeno. The asymptotic (marginal) cases $\lambda = -1$ and $\lambda = \infty$ are studied too. Finally, some concrete computations illustrate the previous theory.

Keywords: (classical) measure, monotone measure, λ-measure, Choquet integral, Sugeno integral

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