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A note on upper and lower Sugeno integrals. (English) Zbl 1094.28012
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The Sugeno integral for functions measurable with respect to a paving \mathcal{A} (system of subsets of a universe X containing the empty set) and fuzzy measures on \mathcal{A} (monotone $\mathcal{A} \rightarrow [0, 1]$ set functions vanishing at the empty set) is introduced and discussed, and extended for arbitrary $X \rightarrow [0, 1]$ functions in two ways: as an upper and a lower Sugeno integral (compared with the standard extensions to an upper and a lower measure in the classical measure theory). Some properties are discussed and illustrated by an example.

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MSC:

28E10 Fuzzy measure theory
06F30 Ordered topological structures

Cited in 1 Document

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