INVARIANT AGGREGATION OPERATORS

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In this paper invariantness of agregation operators with respect to all increasing bijective transformations $\varphi : [0,1] \to [0,1]$ is investigated. At first we recall characterization of all invariant $[0,1]^n \to [0,1]$ functions based on [1]. This characterization is related to the minimal invariant subsets of $[0,1]^n$. We discuss some properties of these minimal invariant subsets. Subsequently, we introduce a necessary condition for the monotonicity of invariant operators. Next we will discuss the characterization of all continuous invariant functions given by S.Ovchinnikov and A. Dukhovny in [6]. These functions are nothing else but Choquet integral with respect to $\{0,1\}$ -valued fuzzy measures μ. Finally, all invariant agregation operators (including non-continuous cases, too) are evaluated in the case of $n = 2$. Note that then there are exactly 68 invariant agregation operators, but only 4 continuous among them. A recurent formula allowing to enumerate all invariant agregation operators for $n > 2$ will be given.

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