



MOMENT AND RELATED TYPE INEQUALITIES FOR SUGENO INTEGRALS

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Abstract. In this paper, we have shown that the Moment type inequality has not satisfied for fuzzy integrals and it has proved with a stronger condition for fuzzy form. Also we have generalized D. H. Hong's work [12], that was weaker version of Gauss's inequality for Sugeno integrals. More presisly, he proved the inequality

$$x^2 \int_x^\infty f(t) d\mu \leq \int_0^\infty t^2 f(t) d\mu,$$

holds for all $x \geq c$, where $f(c) = \frac{1}{c}$, for $c > 0$ and $f(t)$, $t^2 f(t)$ are non-increasing functions on $[0, \infty)$ and μ is the Lebegue measure on \mathbb{R} . In our generalization, we added an extra condition in Theorem 3.7. In this theorem, taking $p = 0$ and $q = 2$, we obtained Gauss type inequality for Sugeno integrals.

Communicated by Editors; Received October 23, 2024

AMS Subject Classification: 03E72, 26E50, 28E10.

Keywords: Fuzzy measures, Fuzzy integrals, Moment's inequality, Fuzzy integral inequality.