

**WEIGHTED OSTROWSKI TYPE INEQUALITY FOR A  
RANDOM VARIABLE WHOSE PROBABILITY DENSITY  
FUNCTION BELONGS TO  $L_\infty[a, b]$**

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**ABSTRACT.** We establish here a weighted inequality of Ostrowski type for a random variable whose probability density function belongs to  $L_\infty[a, b]$ , in terms of the cumulative distribution function and expectation. The inequality is then applied to Beta random variable.