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**Qiulan Qi\*** (qiqiulan@163.com), , Peoples Rep of China. *Modified Kantorovich operators providing a better error estimation.*

The approximation operator for every kind of the objective function is different in approximation theory. For Lebesgue functions (or signals), local averages need to be adopted in approximation generally, i.e. using Kantorovich-type polynomials to approximate from local average. But the first and second moments of this kind of Kantorovich-type operators are not zero, which makes the problems more difficult to deal with.

King-type approximation operators preserving the test functions 1 and  $x^2$ , and have better approximation properties than the classical ones. Motivated by this, we introduce a kind of modified Kantorovich operators, which preserve the test functions 1 and  $x^2$  and have better error estimation on the interval  $[\frac{\sqrt{3}}{3}, +\infty)$  than the classical and the modified Szász-Kantorovich operators discussed in Duman. (Received August 07, 2014)