ON THE PAPER "STATISTICAL APPROXIMATION BY POSITIVE LINEAR OPERATORS"

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ABSTRACT. We give a counterexample to show that the main result of [1] is incorrect.

Following the terminology of [1], we give a counterexample to show that the main result (Theorem 3) of [1] is incorrect.

Counterexample : Let $\rho_1, \rho_2 : \mathbb{R} \to \mathbb{R}$ be defined by
$$\rho_1(x) = 1 + x^2 \text{ and } \rho_2(x) = (1 + x^2)^2.$$
For each $n \in \mathbb{N}$, $T_n : C_{\rho_1} \to B_{\rho_2}$ be defined as follows:
$$T_n(f) = \tfrac{1}{n} f(n) + f.$$
Then for each $i = 0, 1, 2,$
$$||T_n(F_i) - F_i||_{\rho_1} \to 0,$$
but
$$||T_n(\rho_1) - \rho_1||_{\rho_2} = \tfrac{1+n^2}{n} \to \infty.$$

REFERENCES

[1] O. Duman & C. Orhan, *Statistical approximation by positive linear operators*, Studia Math. 161 (2004), no.2, 187-197.

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