

Mercer type inequalities for normalised isotonic linear functionals with applications

By LÁSZLÓ HORVÁTH (Veszprém)

Abstract. In this paper, we give new Mercer type inequalities for normalised isotonic linear functionals which contain Niezgoda's inequality as a very special case. We deal with some particular forms of the obtained inequalities and study some refinements of them. The results are applied to means generated by normalised isotonic linear functionals. As another application, we extend Mercer's inequality to an operator inequality for convex (not operator convex) functions. An unusual feature of this result is to use closed normal subalgebras instead of a single operator.

LÁSZLÓ HORVÁTH
DEPARTMENT OF MATHEMATICS
UNIVERSITY OF PANNONIA
EGYETEM U. 10.
8200 VESZPRÉM
HUNGARY

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