

EXACT INTEGRAL INEQUALITIES FOR CONVEX FUNCTIONS

TAMÁS F. MÓRI

Abstract. Pachpatte [2] presented linear inequalities involving certain integrals of convex functions defined on a finite closed interval. In the present note we explore the the whole set of possible values of those quantities, thus obtaining sharp inequalities that cannot be further improved. Our results are obtained by the application of the convexity method, a simple but powerful tool which is often used in probability theory for deriving moment-type inequalities.

Mathematics subject classification (2000): 60E15, 26D15.

Key words and phrases: Convexity, Pachpatte inequality.

REFERENCES

- [1] V. CSISZÁR AND T. F. MÓRI, *The convexity method of proving moment-type inequalities*, Statist. Probab. Lett., **66** (2003), 303–313.
- [2] B. G. PACHPATTE, *On some inequalities involving convex functions*, RGMIA Research Report Collection **3**(3) Article 16, (2000), [online: <http://matilda.vu.edu.au/~rgmia/v3n3/IICV.pdf>].