

ON SLATER'S INTEGRAL INEQUALITY

M. ADIL KHAN AND J. PEČARIĆ

Abstract. In this paper we give a generalization of results given by Pečarić and Adil (2010). We use a log-convexity criterion and establish improvements and reverses of Slater's and related inequalities.

Mathematics subject classification (2010): Primary 26A51, 26A24, 26A48.

Keywords and phrases: Slater's integral inequality, convex function, exponential convexity, Cauchy means.

REFERENCES

- [1] M. ADIL KHAN AND J. PEČARIĆ, *Improvement and reversion of Slater's inequality and related results*, J. Inequal. Appl. **2010**, Article ID 646034.
- [2] M. ANWAR, J. JAKŠETIĆ, J. PEČARIĆ AND ATIQ UR REHMAN, *Exponential convexity, positive semi-definite matrices and fundamental inequalities*, J. Math. Inequal. **4**, 2 (2010), 171–189.
- [3] M. ANWAR AND J. PEČARIĆ, *On logarithmic convexity for differences of power means and related results*, Math. Inequal. Appl. **12**, 1 (2009), 81–90.
- [4] S. S. DRAGOMIR AND C. J. GOH, *A counter part of Jensen's discrete inequality for differentiable convex mapping and applications in information theory*, Math. Comput. Modelling **24**, 2 (1996), 1–11.
- [5] F. HANSEN, J. PEČARIĆ AND I. PERIĆ, *Jensen's operator inequality and its converses*, Math. Scand. **100**, 1 (2007), 61–73.
- [6] M. MATIĆ AND J. PEČARIĆ, *Some companion inequalities to Jensen's inequalities*, Math. Inequal. Appl. **3**, 3 (2000), 355–368.
- [7] J. PEČARIĆ, *A companion inequality to Jensen Steffensen's inequality*, J. Approx. Theory **44** (1985a), 289–291.
- [8] J. PEČARIĆ, *Multidimensional generalization of Slater's inequality*, J. Approx. Theory **44** (1985b), 292–294.
- [9] J. PEČARIĆ, F. PROSCHAN AND Y. L. TONG, *Convex functions, Partial Orderings and Statistical Applications*, Academic Press, New York, 1992.
- [10] M. L. SLATER, *A companion inequality to Jensen's inequality*, J. Approx. Theory **32** (1981), 160–166.