n–EXPONENTIAL CONVEXITY OF WEIGHTED HERMITE–HADAMARD'S INEQUALITY

SAAD IHSAN BUTT, ROZARIJA JAKŠIĆ, LJILJANKA KVESIĆ AND JOSIP PEČARIĆ

Abstract. In this paper we construct n-exponentially convex functions and exponentially convex functions using the functional defined as the difference of the weighted Hermite-Hadamard's inequality for monotone functions.

REFERENCES

[1] G. ZABANDAN, A. KILICMAN, *Several integral inequalities and upper bound for the bidimensional Hermite-Hadamard's inequality*, J. Inequal. Appl. (2013), 2013–27.

[2] L. FEJÉR, *Über die Fourierreihen, II*, Math. Natur wiss. Anz Ungar. Akad Wiss. **24** (1906), 369–390 (in Hungarian).

[3] R. JAKŠIĆ, L. KVESIĆ, J. PEČARIĆ, *On weighted generalization of the Hermite-Hadamard's inequality*, Math. Inequal. Appl. (to asppear)

[4] A. M. FINK, D. S. MITRINOVIĆ AND J. PEČARIĆ, *Classical and new inequalities in analysis*, Kluwer Academic Publishers, The Netherlands, 1993.

[5] J. JAKŠETIĆ AND J. PEČARIĆ, *Exponential convexity method*, J. Convex Anal. **20** (2013), 181–197.

[6] J. PEČARIĆ AND J. PERIĆ, *Improvements of the Giaccardi and the Petrović inequalty and related Stolarsky type means*, An. Univ. Craiova Ser. Mat. Inform. **39**, 1 (2012), 65–75.

[7] J. PEČARIĆ, F. PROSCHAN AND Y. L. TONG, *Convex functions, Partial Orderings and Statistical Applications*, vol. **187** of Mathematics in Science and Engineering, Academic Press, Boston, Mass, USA, 1992.

[8] K. B. STOLARSKY, *Generalization of the logarithmic mean*, Math. Mag. **48** (1975), 87–92.

[9] GH. TOADER, *Superaddivtivity and Hermite-Hadamard's inequalites*, Studia Univ. Babeş-Bolyai Math. **39** (1994), 27–32.

[10] J. JAKŠETIĆ, J. PEČARIĆ AND ATIQ UR REHMAN, *On Stolarsky and related means*, Math. Inequal. Appl. **13**, 4 (2010), 899–909.

[11] S. ABRAMOVICH, G. JAMESON AND G. SINNAMON, *Refining Jensen's inequality*, Bull. Math. Sic. Marh. Roum. **47** (2004), 3–14.

Journal of Mathematical Inequalities
www.ele-math.com
jmi@ele-math.com