

SOME INEQUALITIES FOR THE ČEBYŠEV FUNCTIONAL AND EULER TWO-POINT FORMULAE

J. PEČARIĆ AND A. VUKELIĆ

Abstract. We use inequalities for the Čebyšev functional in terms of the first derivative (see [3]), for some new bounds for the remainder of general Euler two-point formula and its generalization for Bulen type formula.

Mathematics subject classification (2010): 26D15, 26D20, 26D99.

Keywords and phrases: Čebyšev functional, general Euler two-point formula, Bulen type formula, Euler trapezoid formula, Euler midpoint formula, Euler two-point Newton-Cotes formula, Euler two-point Maclaurin formula, Euler bitrapezoid formula.

REFERENCES

- [1] M. ABRAMOWITZ AND I. A. STEGUN (Eds), *Handbook of mathematical functions with formulae, graphs and mathematical tables*, National Bureau of Standards, Applied Math. Series 55, 4th printing, Washington 1965.
- [2] I. S. BEREZIN AND N. P. ZHIDKOV, *Computing methods*, Vol. I, Pergamon Press, Oxford, 1965.
- [3] P. CERONE AND S. S. DRAGOMIR, *Some new bounds for the Čebyšev functional in terms of the first derivative and applications*, *J. Math. Ineq.* **8** (1) (2014), 159–170.
- [4] M. KLARIČIĆ BAKULA, J. PEČARIĆ, *Generalized Hadamard's inequalities based on general Euler 4-point formulae*, *ANZIAM J.* **48** (2007), 1–18.
- [5] J. PEČARIĆ, I. PERIĆ, A. VUKELIĆ, *On general Euler two-point formulae*, *ANZIAM J.* **46** (2005), 555–574.
- [6] J. PEČARIĆ, A. VUKELIĆ, *Estimations of the error for two-point formula via pre-Grüss inequality*, *Gen. Math.* **13** (2) (2005), 95–104.