

IMPROVING SOME INEQUALITIES ASSOCIATED WITH THE EULER-MASCHERONI CONSTANT

JENICA CRINGANU

Abstract. The aim of this paper is to improve the results obtained by Chen and Mortici in 2013 about the inequalities for the Euler-Mascheroni constant.

Mathematics subject classification (2010): 40A05, 33B15, 11Y60.

Keywords and phrases: Sequence, convergence, Euler-Mascheroni constant.

REFERENCES

- [1] H. ALZER, *Inequalities for the gamma and polygamma functions*, Abh. Math. Sem. Univ. Hamburg **68** (1998) 363–372.
- [2] G. D. ANDERSON, R. W. BARNARD, K. C. RICHARDS, M. K. VAMANAMURTHY, M. VUORINEN, *Inequalities for zero-balanced hypergeometric functions*, Trans. Amer. Math. Soc. **345** (1995) 1713–1723.
- [3] C. P. CHEN, *Inequalities for the Euler-Mascheroni constant*, Applied Mathematics Letters **23** (2010) 161–164.
- [4] C. P. CHEN, C. MORTICI, *Limits and inequalities associated with the Euler-Mascheroni constant*, Applied Mathematics and Computation **219** (2013) 9755–9761.
- [5] D. W. DETEMPLE, *A quicker convergence to Euler's constant*, Amer. Math. Monthly **100** (5) (1993) 468–470.
- [6] C. MORTICI, A. VERNESCU, *An improvement of the convergence speed of the sequence $(\gamma_n)_{n \geq 1}$ converging to Euler's constant*, An. Stiint. Univ. "Ovidius" Constanta **13** (1) (2005) 97–100.
- [7] C. MORTICI, A. VERNESCU, *Some new facts in discrete asymptotic analysis*, Math. Balkanica (NS) **21** (Fasc. 3-4) (2007) 301–308.
- [8] T. NEGOI, *A faster convergence to the constant of Euler*, Gazeta Matematica Seria A **15** (1997) 111–113 (in Romanian).
- [9] S. R. TIMS, J. A. TYRREL, *Approximate evaluation of Euler's constant*, Math. Gaz., **55** (1971) 65–67.
- [10] L. TOTH, *Problem E3432*, Amer. Math. Monthly, **98** (3) (1991) 264.
- [11] L. TOTH AND J. BUKOR, *On the alternating series $1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \dots$* , J. Math. Anal. Appl. **282** (2003) 21–25.
- [12] R. M. YOUNG, *Euler's constant*, Math. Gaz. **75** (472) (1991) 187–190.