

## NOTE ON THE DISCRETE OSTROWSKI-GRÜSS TYPE INEQUALITY

YU MIAO

*Abstract.* In the present note, we establish several new discrete Ostrowski-Grüss type inequalities which extend some known results.

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### REFERENCES

- [1] X. L. CHENG AND J. SUN, *A note on the perturbed trapezoid inequality*, JIPAM. J. Inequal. Pure Appl. Math. **3(2)**, Article 29, (2002).
- [2] S. S. DRAGOMIR, *A Grüss type discrete inequality in inner product spaces and applications*, J. Math. Anal. Appl., **250**(2) 494–511, (2000).
- [3] S. S. DRAGOMIR, *The discrete version of Ostrowski's inequality in normed linear spaces*, J. Inequal. Pure and Appl. Math. **3(1)** Art. 2, (2002).
- [4] S. S. DRAGOMIR, *A companion of the Grüss inequality and applications*, Appl. Math. Lett. **17** 429–435 (2004).
- [5] S. S. DRAGOMIR AND S. WANG, *An inequality of Ostrowski-Grüss' type and its applications to the estimation of error bounds for some special means and for some numerical quadrature rules*, Computers Math. Applic. **33 (11)**, 15–20 (1997).
- [6] N. ELEZOVIĆ, L. MARANGUNIĆ AND J. PEČARIĆ, *Some improvements of Grüss type inequality*, J. Math. Inequal. **1(3)**, 425–436 (2007).
- [7] Z. LIU, *A sharp integral inequality of Ostrowski-Grüss type*, Soochow J. Math. **32(2)**, 223–231 (2006).
- [8] M. MATIĆ, J. PEČARIĆ AND N. UJEVIĆ, *Improvement and further generalization of inequalities of Ostrowski-Grüss type*, Computers Math. Applic. **39 (3/4)**, 161–175 (2000).
- [9] A. M. MERCER, *An improvement of the Grüss inequality*, JIPAM. J. Inequal. Pure Appl. Math. **6(4)**, Article 93 (2005).
- [10] D. S. MITRINović AND J. PEČARIĆ, *Monotone functions and their inequalities*, Naučna Knjiga, Belgrade, 1990.
- [11] D. S. MITRINović, J. PEČARIĆ AND A. M. FINK, *Classical and New Inequalities in Analysis*, Kluwer Academic Publishers, Dordrecht, (1993).
- [12] A. OSTROWSKI, *Über die Absolutabweichung einer differenzierbaren Funktion von ihrem Integralmittelwert*, Comment. Math. Helv. **10**, 226–227 (1938) (German).
- [13] B. G. PACHPATTE, *New discrete Ostrowski-Grüss like inequalities*, Facta Univ. Ser. Math. Inform. **22** (1), 15–20 (2007).