

TRIGONOMETRIC INEQUALITIES IN THE MVBV CONDITION

LEI FENG AND SONGPING ZHOU

Abstract. This paper establishes some important trigonometric inequalities under the new *MVBV* real sense frame for future applications.

Mathematics subject classification (2010): 42A05.

Keywords and phrases: Trigonometric inequality, mean value bounded variation.

REFERENCES

- [1] L. FENG, V. TOTIK, S. P. ZHOU, *Trigonometric series with a generalized monotonicity condition*, Acta Math. Sinica English Ser., online.
- [2] L. FENG AND S. P. ZHOU, *An application of MVBV condition in real sense for L^1 -convergence of trigonometric series*, Acta Math. Hungar., online
- [3] R. J. LE AND S. P. ZHOU, *A generalization of an important trigonometric inequality*, J. Anal. Appl. 3 (2005), 163–168.
- [4] L. LEINDLER, *On the uniform convergence and boundedness of a certain class of sine series*, Anal. Math. 27 (2001), 279–285.
- [5] S. A. TELYAKOVSKII, *On partial sums of Fourier series of functions of bounded variation*, Proc. Steklov. Inst. Math. 219 (1997), 372–381.
- [6] M. Z. WANG AND Y. ZHAO, *Generalizations of some classical results under MVBV condition*, Math. Ineq. Appl. 12 (2009), 433–440.
- [7] S. P. ZHOU, *Monotonicity Condition of Trigonometric Series: Development and Application*, Science Press, Beijing, 2012, in Chinese.
- [8] S. P. ZHOU, D. S. YU AND P. ZHOU, *Trigonometric series with piecewise bounded variation coefficients*, Acta Math. Sinica Chinese Ed. 51 (2008), 633–646, in Chinese.
- [9] S. P. ZHOU, P. ZHOU AND D. S. YU, *Ultimate generalization to monotonicity for uniform convergence of trigonometric series*, Science China Math. 53(2010), 1853-1862/available: arXiv: math.CA/0611805 v1 27 Nov 2006.