

## THE WEAK TYPE INEQUALITY FOR THE MAXIMAL OPERATOR OF THE MARCINKIEWICZ–FEJÉR MEANS OF THE TWO-DIMENSIONAL WALSH-KACZMARZ SYSTEM

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*Abstract.* The main aim of this paper is to prove that the maximal operator  $\sigma^\#$  of the Marcinkiewicz-Fejér means of the two-dimensional Fourier series with respect to the Walsh-Kaczmarz system is bounded from the martingale Hardy space  $H_{1/2}$  to the space weak- $L_{1/2}$  and is not bounded from the martingale Hardy space  $H_{1/2}$  to the space  $L_{1/2}$  provided that the supremum in the maximal operator is taken over spatial indices.

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