

## ON MAXIMAL FUNCTION AND FRACTIONAL INTEGRAL, ASSOCIATED WITH THE BESSEL DIFFERENTIAL OPERATOR

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**Abstract.** In this paper we consider the generalized shift operator, generated by Bessel differential operator  $B$ , by means of which maximal functions ( $B$ -maximal functions) and fractional integrals ( $B$ -fractional integrals) are investigated. The  $L_p(B)$ -boundedness result for the  $B$ -maximal function and  $(L_p(B), L_q(B))$ -boundedness result for the  $B$ -fractional integral are obtained.

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*Key words and phrases:* Bessel differential operator,  $B$ -maximal function,  $B$ -fractional integral.

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