

# BERNSTEIN INEQUALITY ON NON-COMPACT SYMMETRIC SPACES

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ABSTRACT. By using Bernstein-type inequality we define analogs of spaces of entire functions of exponential type in  $L_p(X)$ ,  $1 \leq p \leq \infty$ , where  $X$  is a symmetric space of non-compact. We give estimates of  $L_p$ -norms,  $1 \leq p \leq \infty$ , of such functions (the Nikolskii-type inequalities) and also prove the  $L_p$ -Plancherel-Polya inequalities which imply that our functions of exponential type are uniquely determined by their inner products with certain countable sets of measures with compact supports and can be reconstructed from such sets of "measurements" in a stable way.

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