

Meeting: 1003, Atlanta, Georgia, SS 25A, AMS Special Session on Complex and Functional Analysis, I

1003-46-1342 **Alexander A. Katz** (katza@stjohns.edu), Dep. of Math & CS, 300 Howard Ave., DaSilva Hall R 335, Staten Island, NY 10301, and **Sukhrat M. Usmanov*** (shukhrat.usmanov@ndsu.nodak.edu), 182D University Village, Fargo, ND 58102. *On Non-commutative L_p -spaces for real operator algebras of type III.*

In the present paper the real non-commutative L_p -spaces for finite $p > 1$, are constructed for a real von Neumann algebras of type III. The three known constructions of non-commutative L_p -spaces for complex von Neumann algebras: the construction of Haagerup (via crossed products and duality of von Neumann algebras of type III), the construction of Connes and Hilsun (via spatial derivatives) and the construction of Kosaki and Terp (using complex interpolation of Banach spaces) are used. The real non-commutative L_p -spaces for finite $p > 1$, obtained by these different methods are compared. (Received October 04, 2004)