

OPERATORS ON ABSTRACT HARDY SPACES OF ANALYTIC FUNCTIONS

MIECZYSLAW MASTYLO
ADAM MICKIEWICZ UNIVERSITY (POLONIA)

ABSTRACT. We study properties of functions from abstract Hardy spaces HX induced by rearrangement invariant (r.i.) spaces X on $[0, 2\pi]$. We prove the mean convergence to boundary values in HX generated by a maximal an separable r.i. space X . We apply this result to discuss and provide norm estimates of operator T radially generated by a matrix in terms of the mixed nor of the matrix where T maps HX into a complex Banach sequence lattice. Based on interpolation methods we prove the Hausdorff-Young and Hardy-Littlewood type theorems and show applications to study absolutely p -summing multipliers from the Hardy-Orlicz spaces to the Orlicz sequence lattices. The obtained results extend the well known results for the classical Hardy spaces H_p and sequence spaces l_p