



**H. Turgay KAPTANOGLU**

(kaptan@math.metu.edu.tr), Department of Mathematics, Middle East Technical University, Ankara 06531, Turkey, *A New Look at Diagonal Besov Spaces on the Ball.*

ABSTRACT. A more natural definition of diagonal Besov spaces  $B_s^p$  on the unit ball is given that categorizes them the same way as weighted Bergman spaces. The definition depends on a class of fractional-order radial differential operators. A Forelli-Rudin-type theorem is proved to consider  $0 < p < 1$ . Bergman projections on, duality and complex interpolation between these spaces are investigated. A certain family of these spaces are related to the minimal Möbius-invariant space  $\mathcal{M}$ . There are also consequences for the Bloch space and the Hardy space  $H^2$ .