

On the invertibility of paired operators within ordered groups

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Using the Fourier coefficient representation of functions defined on L^p spaces over a compact connected abelian group, we will present an invertibility study for a class of paired operators acting between these L^p spaces. The main goal is to obtain sufficient conditions to the invertibility of this type of operators, and their inverses representation. This is done for the particular case of paired operators with coefficients in the corresponding Wiener algebra upon the consideration of consequent factorizations. As a consequence, conditions for the one-sided invertibility and two-sided invertibility of the paired operators are identified and explicit formulas for their inverses are also presented.

The talk is based on a joint work with L.P. Castro.