

## WEIGHTED $L_p$ -NORM INEQUALITIES IN CONVOLUTIONS AND THEIR APPLICATIONS

NGUYEN DU VI NHAN AND DINH THANH DUC

**Abstract.** In this paper, we give some new type of convolution inequalities in weighted  $L_p(\mathbb{R}^2, dx dy)$  spaces and their important applications to partial differential equations and integral transforms. Especially, we will see their applications to non-homogeneous linear differential equations.

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