

SEMINAR

Grupo de Análise Funcional e Aplicações
Functional Analysis and Applications Group

New convolutions associated with Mellin transform and its applications in integral equations

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Abstract

The main purpose of this talk is to present two new convolutions associated with the Mellin transform and in the framework of Lebesgue spaces. One of the most important properties of a convolution is to satisfy a factorization property which is typically associated with one or more than one integral operators (the Convolution Theorem). In most of the cases, such factorization property is fundamental to solve consequent integral equations which can be characterized by those convolutions. In this sense, we show that the convolutions introduced exhibit certain factorization identities when considering the integral operators under study. As applications, we present the solvability of an integral equation and a system of integral equations of new convolution type.

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