

Hypergeometric Distributions and Tricomi Operators

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Consider the generalized Tricomi operator

$$\mathcal{T}_g = y\Delta_x + \frac{\partial^2}{\partial y^2},$$

with $\Delta_x = \sum_{j=1}^n \partial^2/\partial x_j^2$, $n > 1$. To each of these operators corresponds a certain hypergeometric distribution, in the sense of S. Delache & J. Leray and I. M. Gelfand, that plays a fundamental role in finding fundamental solutions for \mathcal{T}_g . With these, we can strengthen and extend the results of our paper “Bessel Integrals and Fundamental Solutions for a Generalized Tricomi Operator.”

Presented by J. Barros-Neto