

# ON THE GENERALIZATION OF THE LÉVY-LEBLOND EQUATION FOR A SPIN 3/2 PARTICLE

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**ABSTRACT.** Generalizing the linearization procedure used by Dirac and later by Lévy-Leblond, we derive the first-order non-relativistic wave equation for a particle of spin 3/2 starting from the Schrödinger equation. By the introduction in the momentum of a correction linear in coordinates, we establish the wave equation of the radial harmonic oscillator with spin-orbit coupling