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Nestor Guillen* (nguillen@math.utexas.edu). *Non-local notions of curvature.*

Non-local elliptic operators have received a great deal of attention in the last couple of years. While the connection between stochastic processes and elliptic equations remains strong in the non-local (fractional order) as much as in the local (second order) case, the connection with geometry is less understood. This is a problem as geometry has been an important source of problems and insight into the nature of elliptic equations. I will discuss recent works on non-local equations that pertain to questions in differential geometry and vice versa. (Received February 07, 2011)