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Alexander (Oleksandr) V Tovstolis* (atovstolis@math.okstate.edu), 401 Mathematical Sciences, Stillwater, OK 74078. *On Riesz Decomposition of Super-Polyharmonic Functions.*

We consider a Riesz decomposition of a function u super m -harmonic in \mathbb{R}^n . It is shown that u is a sum of the Riesz potential of the measure $\mu = (-\Delta)^m u$ and an m -harmonic function, if and only if a particular linear combination of spherical means for u is bounded.

The statement generalizes the results of K. Kitaura and Y. Mizuta (2006) for super-biharmonic functions. (Received July 28, 2014)