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Nicola Garofalo, University of Padova , and **Jeremy T Tyson*** (tyson@illinois.edu),
University of Illinois at Urbana Champaign, Urbana, IL. *Hiesz potentials and p -superharmonic
functions in Carnot groups of Heisenberg type.*

I will discuss a superposition principle for Riesz potentials of nonnegative continuous functions on Carnot groups of Heisenberg type. Specifically, the Riesz potential $R_a(u)$ of a nonnegative continuous function u on a Heisenberg type Carnot group G is necessarily either p -subharmonic or p -superharmonic, depending on p and a . The Riesz potentials in question are defined using Kaplan's homogeneous norm. This result extends to a wide class of step two nonabelian stratified Lie groups a remarkable superposition theorem of Crandall-Zhang and Lindqvist-Manfredi. This talk is based on an old paper of the author with Nicola Garofalo. (Received July 25, 2016)