

Meeting: 1000, Albuquerque, New Mexico, SS 13A, Special Session on Analysis and Geometry in Carnot-Caratheodory Spaces

1000-35-41 **Emily D. Shores*** (eshores23@yahoo.com), 4254 Brighten Avenue, Springdale, AR 72762. *A regularity result for sub-elliptic systems in Carnot Groups.*

In this talk I will show that if u is a weak solution (in the sense of distributions) to a constant coefficient system in a Carnot Group (no restriction on the step), then u is actually smooth. We can then use this result to develop blow-up analysis to prove a partial regularity results for weak solutions of certain non-linear systems. (Received August 03, 2004)