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Lance D. Drager, Jeffrey M Lee, Efton Park and Ken Richardson*
(k.richardson@tcu.edu). *Smooth and cosmooth general distributions.*

Smooth and cosmooth general distributions are subbundles of the tangent bundle of a manifold that do not have constant rank yet share many of the features of smooth distributions of constant rank. I will discuss joint work with my coauthors in proving that all such distributions are finitely generated, meaning that a finite set of vector fields (or one-forms in the case of cosmooth distributions) suffices to be a pointwise spanning set of the distribution. At the same time, we demonstrate that the corresponding spaces of sections of these distributions are not finitely generated as modules over the smooth functions. I will also discuss some open problems in analysis and spectral theory for these distributions. (Received February 09, 2014)