Ben Jaye* (bjaye@clemson.edu). Regularity properties of Calderon-Zygmund operators and associated extremal problems.

In this talk we will review some problems concerning the geometry of a measure for which an associated Calderón-Zygmund operator behaves well (e.g. it is bounded in $L^2$, or exists in principal value). We will relate each of these problems to a description of certain extremal classes of measures, describe what is known about these measures and state some open problems. Some of this work is joint with Fedor Nazarov, and some is joint with Tomás Merchán. (Received February 03, 2019)