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Kasso Okoudjou* (kasso@math.umd.edu), Department of Math, Math Bldg, College Park, MD 20742. *Scalable frames*. Preliminary report.

A finite frame for \mathbb{R}^d is scalable if its vectors can be scaled by nonnegative numbers to yield a tight frame. In this talk, two equivalent characterizations of the class of scalable frames will be given. The first characterization is based on Fritz John's ellipsoid theorem while the second involves optimizing certain functional of the frame. Together, these two characterizations give a geometrical as well as a numerical conditions for a frame to be scalable. This talk is based on joint work with X. Chen, G. Kutyniok, F. Philipp, and R. Wang. (Received August 26, 2013)