1038-05-188 **Dai Wei**, **Negar Kiyavash** and **Olgica Milenkovic*** (milenkov@uiuc.edu), 211 W. California Av., Urbana, IL 61801. *Spherical codes for sparse digital fingerprinting.*

We address the problem of designing fingerprinting codes that are resilient against averaging collusion attacks in the presence of Gaussian noise. The decoder performs full decoding in terms of identifying all colluding members using a correlation decision statistic. The fingerprint embedder and the colluders are subject to squared-error distortion constraints. Given a maximum number of colluders, we derive bounds on the achievable rates of fingerprinting codes, and spherical codes in particular, for which one can guarantee that the asymptotic error probability of the correlation decoder tends to zero. (Received February 08, 2008)