

1010-05-116

Douglas Edmonds Carroll* (dcarroll@cs.ucla.edu), UCLA, Computer Science Department, 4732 Boelter Hall, Los Angeles, CA 90095, and **Adam Meyerson** and **Ashish Goel**. *Embedding Bounded Bandwidth Graphs into ℓ_1* .

We introduce the first embedding of graphs of low *bandwidth* into ℓ_1 , with distortion depending only upon the bandwidth. We extend this result to a new graph parameter called *tree-bandwidth*, which is very similar to (but more restrictive than) tree-width. Our results make use of a new technique that we call *iterative embedding*, in which we define coordinates for a small number of points at a time. (Received August 22, 2005)