Meeting: 1001, Evanston, Illinois, SS 2A, Special Session on Extremal Combinatorics

1001-05-303 **Jozsef Balogh***, The Ohio State University, Mathematics Department, 231 West 18th Street, Columbus, OH 43210, and **Dhruv Mubayi** and **Andras Pluhar**. *Optimal Graph Labellings: Edge-bandwidth of graphs.*

An edge labelling of a graph G is a bijection between $E(G)$ and $1, \ldots, |E(G)|$. The bandwidth of a labelling η is $\max |\eta(e) - \eta(f)|$, where the maximum is taken over every pair of adjacent edges. The edge-bandwidth of a graph G is the minimum bandwidth of all labellings. We asymptotically determined the edge-bandwidth of several "grid" type of graphs; $P_n * P_n$, $C_n * C_n$, $K_n * K_n$ and $P_2^n = K_2^n$, where P_n denotes the path of n vertices, C_n is the cycle of n vertices, K_n is the clique on n vertices, and K_2^n stands for the n-dimensional hypercube. (Received August 30, 2004)