

1068-05-76

Albert Bush, Georgia Institute of Technology, Atlanta, GA 30332, and **Yi Zhao***, Department of Math. and Stat., Georgia State University, Atlanta, GA 30303. *Minimum degree thresholds for bipartite graph tiling.*

Given a bipartite graph H and a positive integer n such that $v(H)$ divides $2n$, we define the minimum degree threshold for bipartite H -tiling, $\delta_2(n, H)$, as the smallest integer k such that every bipartite graph G with n vertices in each part and with minimum degree $\delta(G) \geq k$ contains a spanning subgraph which consists of vertex-disjoint copies of H . Zhao, Hladký-Schacht, Czygrinow-DeBiasio determined $\delta_2(n, K_{s,t})$ exactly for all $s \leq t$ and sufficiently large n . In this talk we determine $\delta_2(n, H)$, up to an additive constant, for all bipartite H and sufficiently large n . Additionally, we give a corresponding minimum degree threshold to guarantee that G has an H -tiling missing only a constant number of vertices. Our $\delta_2(n, H)$ depends on either the chromatic number $\chi(H) = 2$ or the critical chromatic number $\chi_{cr}(H)$ while the threshold for the almost perfect tiling only depends on $\chi_{cr}(H)$. These results can be viewed as bipartite analogs to the results of Kuhn and Osthus and of Shokoufandeh and Zhao for general tiling. (Received January 12, 2011)