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**Alexander Halperin\*** (adhalperin@salisbury.edu), 1101 Camden Ave., Salisbury, MD 21801,  
and **Colton Magnant**. *Large Hamiltonian Balanced Bipartite Graphs with Arbitrary Partitions.*

When can we determine the structure of a hamiltonian cycle within a bipartite graph? We know that a balanced bipartite graph  $G$  with  $\delta(G) \geq \frac{n}{4}$  is hamiltonian, but we want to travel a specific distance between each ordered pair of  $k$  chosen vertices on our hamiltonian cycle. We use the Regularity and Blow-Up Lemmas to show that a sufficiently large balanced bipartite graph  $G$  of order  $n$  with the sharp condition  $\delta(G) \geq \frac{n+4k}{4}$  contains a hamiltonian cycle that visits any choice of  $k$  vertices in order and has prescribed path lengths (summing to  $n$  and obeying the necessary parity) between each pair of chosen vertices. (Received September 04, 2015)