

# A sufficient condition for the interval colorability of (3, 4)-biregular graphs

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## Abstract

An interval coloring of a graph  $G$  is a proper coloring of  $E(G)$  by positive integers such that the colors on the edges incident to any vertex are consecutive. A (3, 4)-biregular bigraph is a bipartite graph in which each vertex of one part has degree 3 and each vertex of the other has degree 4; it is unknown whether these all have interval colorings. We prove that  $G$  has an interval coloring using 6 colors when  $G$  is a (3, 4)-biregular bigraph having a spanning subgraph whose components are paths with endpoints at 3-valent vertices and lengths in  $\{2, 4, 6, 8\}$ . This is joint work with A. Asratian, C.J. Casselgren, and D.B. West.