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Tara Abrishami* (tabrish1@jhu.edu) and **Edward Scheinerman** (ers@jhu.edu), Office of Engineering Graduate Acad Affairs, Wyman Park Building, 3rd Floor, Johns Hopkins University, Baltimore, MD 212128. *Eigenvalues of Cographs*. Preliminary report.

Cographs are a recursively defined family of graphs built from a single vertex by the operations of disjoint union and complement. The eigenvalues of a cograph's Laplacian are nonnegative integers, and we explore their combinatorial significance, including the case of randomly generated cographs. We are particularly interested in understanding the second smallest eigenvalue of the Laplacian (known as the algebraic connectivity). (Received September 21, 2018)