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G. Abrams, G. Aranda Pino and **Z. Mesyan***, Department of Mathematics, University of Colorado, Colorado Springs, CO 80918, and **C. Smith**. *Leavitt Path Algebras and Possible Prime Spectra of Rings*.

We associate in a natural way to any partially ordered set (P, \leq) a directed graph E_P (where the vertices of E_P correspond to the elements of P , and the edges of E_P correspond to related pairs of elements of P), and then describe the prime spectrum of the resulting Leavitt path algebra $L_K(E_P)$. This construction allows us to realize a wide class of partially ordered sets as the prime spectra of rings, which includes many partially ordered sets not previously known to be so realizable. (Received July 05, 2016)