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**Susan G Williams\***, swilliam@southalabama.edu, and **Daniel S. Silver**. *Frieze and wallpaper graphs and their medial links*.

The medial link construction associates to any finite plane graph  $G$  an alternating link  $\mathcal{L}$  for which  $G$  is the Tait graph. It is well known that the number of components of  $\mathcal{L}$  is the nullity of the mod-2 Laplacian matrix of the graph.

We give analogous results for *frieze graphs* and *wallpaper graphs*, plane graphs admitting a free action of  $\mathbb{Z}$  or  $\mathbb{Z}^2$  with finite quotient graph. The medial link construction gives a (generalized) link that may have infinitely many components, not necessarily closed. We associate to  $G$  a finitely generated module  $C(G)$  over the ring of Laurent polynomials in one or two variables with mod-2 coefficients, presented by a Laplacian matrix that is easily obtained from the graph data. We determine the orbit structure of the components of the link under the free action from the sequence of elementary divisors of  $C(G)$ . (Received September 14, 2015)