A graph is bipartite if its vertices can be divided into two sets such that no edge of the graph connects vertices in the same set. Every matrix can be encoded by a weighted bipartite graph where one vertex set corresponds to columns, one corresponds to rows, and the weightings correspond to entries in the matrix. If the graph corresponding to the matrix is planar, it is possible to encode the determinant of the matrix by taking an appropriate sum over all perfect matchings. In this talk, we’ll explore the idea of calculating determinants graph theoretically. We’ll also mention one interesting instance of this: the Alexander polynomial, a knot invariant that comes from taking a certain determinant related to the structure of the knot.