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Pam Sargent* (psargent@math.ubc.ca). *Index bounds for free boundary minimal surfaces of convex bodies.*

In this talk, we give a relationship between the eigenvalues of the Hodge Laplacian and the eigenvalues of the Jacobi operator for a free boundary minimal hypersurface of a Euclidean convex body. We then use this relationship to obtain new index bounds for such minimal hypersurfaces in terms of their topology. In particular, we show that the index of a free boundary minimal surface in a convex domain in \mathbb{R}^3 tends to infinity as its genus or the number of boundary components tends to infinity. (Received January 29, 2018)