

First non-trivial Steklov eigenvalue of the pseudo p -Laplacian on variable domains

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We discuss a shape optimization problem related to the eigenvalues of a nonlinear operator called the pseudo p -laplacian. Such real numbers will be defined as the characteristic frequencies of a free anisotropic nonlinear membrane whose mass is concentrated along the boundary. The spectral optimization problem and the non-euclidean convex geometry of \mathbb{R}^N are related through a weighted Wulff isoperimetric inequality and standard nonlinear methods.