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Weyl-type bounds for Steklov eigenvalues

Abstract

We will present upper and lower bounds for Steklov eigenvalues on domains of \mathbb{R}^N with C^2 boundary which are compatible with the Weyl's asymptotics. Such bounds follow from a comparison of Steklov eigenvalues and Laplacian eigenvalues on the boundary by applying Pohozaev-type identities on an appropriate neighborhood of the boundary and from the min-max principle. Moreover, asymptotically sharp upper bounds on Riesz-means and on the trace of corresponding Steklov heat kernel are provided.

Based on a joint work with J. Stubbe