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A few spectral perturbation results for the curlcurl operator on varying domains

Abstract

We consider the curlcurl operator subject to homogeneous boundary conditions on a bounded domain of the Euclidean space and we study the dependence of the corresponding eigenvalues and eigenfunctions upon domain perturbation. The focus is on regular perturbations in which case the varying domains are considered to be diffeomorphic. Time permitting, we also consider families of domains subject to boundary perturbations of oscillatory type and we discuss spectral stability results under minimal assumptions of the strength of those oscillations.