

ON THE CONVERGENCE OF EIGENVALUES AND EIGENFUNCTIONS OF THE LAPLACIAN WITH WENTZELL-ROBIN BOUNDARY CONDITION

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ABSTRACT

In this paper we are interested in the problem of convergence of the eigenvalues and eigenfunctions of the Laplacian with Wentzell-Robin boundary condition to the eigenvalues and eigenfunctions of the Laplacian with Dirichlet boundary condition when the Robin parameter tends to infinity. We show in particular that the convergence of eigenfunctions is better than the usual internal convergence in $H^1(\Omega)$ and boundary convergence in $L^2(\Gamma)$.

KEYWORDS: Laplacien, Wentzell-Robin Boundary Conditions