

Some results on domain variation of the first eigenvalue of the Laplacian

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We consider the first eigenvalue λ_1 of Laplacian with mixed boundary conditions on domains of the form $\Omega \setminus \mathcal{O}$. Under some geometric assumptions on Ω and \mathcal{O} , we prove the strict monotonicity of $\lambda_1(\Omega \setminus \mathcal{O})$ with respect to certain variations of \mathcal{O} in Ω .