

## **Robin Laplacian in the large coupling limit: convergence and spectral asymptotic**

FATEN BELGACEM, HICHEM BELHADJALI, ALI BENAMOR  
AND AMINA THABET

**Abstract.** We study convergence modes as well as their respective rates for the resolvent difference of Robin and Dirichlet Laplacian on bounded smooth domains in the large coupling limit. Asymptotic expansions for the resolvent, the eigenprojections and the eigenvalues of the Robin Laplacian are performed. Finally we apply our results to the case of the unit disc.

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