NUMERICAL CALCULATION OF EIGENVALUES FOR THE DOMAINS WITH COMPLICATED SHAPE FORMS

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The problem of eigenvalues for the two-dimensional Laplace operator defined on the domains with complicated boundary shape goes out from practical needs, for example: the problem of the cross vibration of membranes. The method presented in this paper and the conformal mapping combined with the Ritz method essentially solves this important problem. This work deals only with problems in which domains are caused by application of the confomal mapping on a rectangle domain and observation of the Ritz method in neighbourhood of the critical points.