

Lower Bounds for Eigenvalues by Nonconforming FEM on Convex Domain

A. B. Andreev

*Dept of Informatics, Technical University of Gabrovo
5300 Gabrovo, Bulgaria*

M. Racheva

*Dept of Mathematics, Technical University of Gabrovo
5300 Gabrovo, Bulgaria*

In this work we analyze the approximations of second order eigenvalue problems (EVPs). The nonconforming piecewise linear finite element with integral degrees of freedom is used. We prove that the eigenvalues computed by means of this element on convex domain are smaller than the exact ones if the mesh size is small enough. Some numerical results are also given.

→ ∞ ◇ ∞ ←