

Benedikt, Jiří; Drábek, Pavel

Estimates of the principal eigenvalue of the p -biharmonic operator. (English) Zbl 1244.35096
Nonlinear Anal., Theory Methods Appl., Ser. A, Theory Methods 75, No. 13, 5374-5379 (2012).

Summary: We provide estimates from below and from above for the principal eigenvalue of the p -biharmonic operator on a bounded domain with the Navier boundary conditions. We apply these estimates to study the asymptotic behavior of the principal eigenvalue for $p \rightarrow +\infty$.

MSC:

- [35P15](#) Estimates of eigenvalues in context of PDEs
- [35J66](#) Nonlinear boundary value problems for nonlinear elliptic equations
- [35J40](#) Boundary value problems for higher-order elliptic equations
- [49R05](#) Variational methods for eigenvalues of operators

Cited in **15** Documents

Keywords:

eigenvalue problem for p -biharmonic operator; estimates of principal eigenvalue subject to Navier boundary conditions

Full Text: [DOI](#)

References:

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- [3] Allegretto, W.; Huang, Y.X., A picone's identity for the p -Laplacian and applications, Nonlinear anal., 32, 819-830, (1998) · [Zbl 0930.35053](#)
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