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On Wielandt's inequality and its application to the asymptotic distribution of the eigenvalues of a random symmetric matrix. (English) [Zbl 0742.62015](#)

Ann. Stat. 19, No. 1, 260-271 (1991).

Authors' summary: A relatively obscure eigenvalue inequality due to *H. Wielandt* [in "Topics in the analytic theory of matrices." Univ. Wisconsin Press, Madison (1967)] is used to give a simple derivation of the asymptotic distribution of the eigenvalues of a random symmetric matrix. The asymptotic distributions are obtained under a fairly general setting. An application of the general theory to the bootstrap distribution of the eigenvalues of the sample covariance matrix is given.

Reviewer: [B.L.S.Prakasa Rao \(New Delhi\)](#)

MSC:

- [62E20](#) Asymptotic distribution theory in statistics
- [62H25](#) Factor analysis and principal components; correspondence analysis
- [15A18](#) Eigenvalues, singular values, and eigenvectors
- [15B52](#) Random matrices (algebraic aspects)

Cited in **32** Documents

Keywords:

eigenvalue inequality; eigenvalues of a random symmetric matrix; bootstrap distribution of the eigenvalues of the sample covariance matrix

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