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Eigenvalues of Large Matrices

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摘要　We recently performed a series of improvement on evaluation of eigenvalues without complicated iterations. In this work we first discuss evaluation of the lowest eigenvalue for given systems, by which one conveniently obtains the value of the lowest eigenvalue based on the dimension and width of given matrix. We also discuss a strong correlation between eigenvalues and diagonal matrix elements for large matrices, by which one is able to predict eigenvalues approximately without iterations.

关键词　eigenvalue large matrix correlation

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