Updating Eigenvectors

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Hi,

I am looking for efficient methods of updating the eigenvectors when the dimensions of the matrix is incremented.

Specifically, if I have a solution to the generalized eigenvalue problem Ax = B λ x with A and B of dimensions nxn. Now A and B are updated to A' and B' of dimensions (n+1)x(n+1) by appending a row, column and a diagonal element. Are there any efficient ways of solving for A'x' = B' λ' x'?

Thanks,
Behjat
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