

On the distance and the angle of subspaces

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Abstract

For two given subspaces of \mathbb{C}^n we investigate their distance and angle on the basis of a joint decomposition of the corresponding orthogonal projectors. Further attention is paid to the notions inclinedness, orthogonal incidence and minimal angle. Some formulas for the spectral norm of orthogonal projectors or functions thereof are derived. Also the proofs of results known from Hilbert space theory, related to orthogonal projectors, are simplified considerably.