

On Reducing of Selfadjoint Operators to Diagonal Form

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We shall discuss the infinite dimensional analog of the following well-known result:

Let A and B be selfadjoint $n \times n$ matrices and let B be non-degenerate. Then the pair A and B can be reduced to the diagonal form if one of the following assumptions holds.

- (i) matrix $B^{-1}A$ is similar to a selfadjoint one;
- (ii) there exists a positive matrix S^{-1} such that $S^{-1}A$ and $S^{-1}B$ commute

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