

國立東華大學應用數學系  
專題演講

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講題：Variances of operators and Bottcher and Wenzel's theorem

時間：100年11月04日(星期五) 15:10-16:50

地點：理學院A324會議室

摘要

An alternative proof of Bottcher and Wenzel's theorem (A. Bottcher, D. Wenzel, The Frobenius norm and the commutator, Linear Application Appl.429(2008)1864-1885) is given which is based on the idea of operator probability ( S. Gudder, Operator probability theory, preprint, 2007). For a pair  $(X, Y)$  of Hilbert-Schmidt operators, we prove that to study a maximal pair  $(X, Y)$  in sense that  $\|XY - YX^T\|_2 = \sqrt{2}\|X\|_2\|Y\|_2$ , it is sufficient to consider the set  $M_3$  of all complex  $3 \times 3$  matrices.



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