

The invariant subspace problem and the Scott Brown's technique

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Let $T \in L(H)$. We say that T has a nontrivial invariant subspace if there is a subspace M of H such that $\{0\} \neq M \neq H$ and $TM \subset M$. In 1932, J. von Neumann addressed the following problem: If X is a Banach space of $\dim \geq 2$ and $T \in L(X)$, does T have a nontrivial invariant subspace? This is called the Invariant Subspace problem (ISP). In 1984, C.J. Read showed that there exists an operator acting on ℓ^1 which has no nontrivial invariant subspace. However the invariant subspace problem remains still open for a separable Hilbert space operator. In this talk we discuss the Scott Brown's technique and give the recent results on the invariant subspace problem.

1 Presented by Jaewoong Kim