On the direct sum of two bounded linear operators and subspace-hypercyclicity

ABSTRACT

In this paper, we study the relation between subspace-hypercyclicity and the direct sum of two operators. In particular, we show that if the direct sum of two operators is subspace-hypercyclic, then both operators are subspace-hypercyclic; however, the converse is true for a stronger property than subspace-hypercyclicity. Moreover, we prove that if an operator T satisfies subspace-hypercyclic criterion, then T $\oplus$ T is subspace-hypercyclic. However, we show that the converse is true under certain conditions.