# Hypercyclic operators are subspace hypercyclic

## ABSTRACT

In this short note, we prove that for a dense set (is a Banach space) there is a non-trivial closed subspace such that is dense in. We use this result to answer a question posed in Madore and Martínez-Avendaño (2011) [9]. In particular, we show that every hypercyclic operator is subspace-hypercyclic.

**Keyword:** Hypercyclicity; Subspace-hypercyclicity