

Yousefi, B.; Rezaei, H.; Doroodgar, J.

Supercyclicity in the operator algebra using Hilbert-Schmidt operators. (English)

Zbl 1196.47009

Rend. Circ. Mat. Palermo (2) 56, No. 1, 33-42 (2007).

Summary: We prove that the supercyclicity criterion for any operator T on a Hilbert space is equivalent to the supercyclicity of the left multiplication operator induced by T in the strong operator topology.

MSC:

47A16 Cyclic vectors, hypercyclic and chaotic operators

47B37 Linear operators on special spaces (weighted shifts, operators on sequence spaces, etc.)

Cited in 4 Documents

Keywords:

supercyclic operator; strong operator topology; Hilbert-Schmidt operators; supercyclicity criterion

Full Text: DOI

References:

- [1] Bes and Peris A., Hereditarily hypercyclic operators, *J. Funct. Anal.*, 167 (1999), 94–112. · Zbl 0941.47002 · doi:10.1006/jfan.1999.3437
- [2] Chan K. C., hypercyclicity of the operator algebra for a separable Hilbert space, *J. Operator Theory*, 42 (1999), 231–244. · Zbl 0997.47058
- [3] Feldman N. S., Miller T. L., Miller V. G., Hypercyclic and supercyclic cohyponormal operators, *Acta. Sci. Math. (Szeged)*, 68 (2002), 303–328. · Zbl 0997.47004
- [4] Gethner R. M., Shapiro J. H., Universal vectors for operators on spaces of holomorphic functions, *Proc. Amer. Math. Soc.*, 100 (1987), 281–288. · Zbl 0618.30031 · doi:10.1090/S0002-9939-1987-0884467-4
- [5] Godefroy G., Shapiro J. H., Operators with dense, invariant, cyclic vector manifolds, *J. Funct. Anal.*, 98 (1991), 229–269. · Zbl 0732.47016 · doi:10.1016/0022-1236(91)90078-J
- [6] Hilden H. M., Wallen L. J., Some cyclic and non-cyclic vectors of certain operators, *Indiana Univ. Math. J.*, 24 (1974), 557–565. · Zbl 0274.47004 · doi:10.1512/iumj.1974.23.23046
- [7] Kitai C., Invariant closed sets for linear operators, Ph. D. Dissertation, University of Toronto, 1982.
- [8] Salas H. N., Hypercyclic weighted shifts, *Trans. Amer. Math. Soc.*, 347 (1995), 993–1004. · Zbl 0822.47030 · doi:10.2307/2154883
- [9] Salas H., Supercyclicity and weighted shifts, *Studia Math.*, 135 (1999), 55–74. · Zbl 0940.47005
- [10] Yousefi B., Rezaei H., Hypercyclicity on the algebra of Hilbert-Schmidt operators, *Result. Math.*, 46 (2004), 174–180. · Zbl 1080.47013
- [11] Yousefi B., Rezaei H., Hypercyclic property of weighted composition operators, *Proc. Amer. Math. Soc.*, to appear. · Zbl 1129.47010

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.