P. Vitse, A tensor product approach to the Operator Corona Problem, J. Operator Theory, 50 (2003), 179–208.

Abstract

Let F be a bounded analytic function on the unit disc D having values in the space L(H) of bounded operators on a Hilbert space H. The Operator Corona Problem is to decide whether the existence of a uniformly bounded family of left inverses of F(z), $z \in D$, guarantees the existence of a bounded analytic left inverse of F. When F is infinite dimensional, in general, the answer is known to be negative (S. Treil, 1988). Some sufficient conditions (on values and/or analytic properties of F) are given for the answer to be positive. The technique uses the tensor product slicing method and the Grothendieck Approximation Property.