DISTANCE ESTIMATES, NORM OF HANKEL OPERATORS AND RELATED QUESTIONS

NAJLA ALTWAJRY, AMANI S. BAAZEEM AND MUBARIZ GARAYEV

Abstract. We consider Berezin symbols and Hankel operators on the Hardy space $H^2(D)$ over the unit disc $D = \{ z \in \mathbb{C} : |z| < 1 \}$ and give their some applications. Namely, we estimate in terms of Hankel operators and Berezin symbols the distances from a given operator to the algebra of all analytic Toeplitz operators and to the set of all Toeplitz operators on $H^2(D)$. We use Hankel operator also to prove some lower estimate for the so-called Berezin number of bounded linear operators on $H^2$. Some other related questions are also discussed.


Keywords and phrases: Berezin symbol, Hankel operator, Toeplitz operator, compact operator, Berezin number, distance estimate, model operator.

REFERENCES