

1079-30-360

Arthur A. Danielyan* (adaniely@usf.edu), Department of Mathematics and Statistics,
University of South Florida, Tampa, FL. *On a polynomial approximation problem.*

Let F be an arbitrary closed subset on the unit circle T and let f be a continuous complex valued function on F . We consider the problem of uniform approximation of f on F by polynomials P_n (of variable z) which are uniformly bounded on T . In a particular case when F is a closed arc of T , this problem was solved by L. Zalcman in 1982. In this talk we give the solution of the problem in the general case. As an application of the main result we also present a new proof for the classical interpolation theorem due to W. Rudin and L. Carleson. (Received January 17, 2012)