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Javier Falco, Paul M. Gauthier, Myrto Manolaki* (myrto.manolaki@ucd.ie) and **Vassili Nestoridis**. *Polynomial and rational approximation in several complex variables.*

The celebrated theorem of Mergelyan states that if K is a compact subset of the complex plane with connected complement, then every continuous function on K which is holomorphic on its interior can be uniformly approximated on K by polynomials. In several complex variables the situation is far from being understood. In this talk, I will present some results on polynomial and rational approximation for products of planar compact sets and graphs of functions. In particular, I will introduce a natural function algebra which allows us to obtain new Mergelyan-type theorems. (Received September 17, 2019)