

1096-47-461

Gelu F Popescu* (gelu.popescu@utsa.edu). *Berezin Transforms on Noncommutative Varieties.*

We study the structure of large classes of noncommutative varieties, determine their elements and classify them up to unitary equivalence. This study can be seen as an attempt to initiate noncommutative algebraic geometry in polydomains. Using noncommutative Berezin transforms, we develop an operator model theory and dilation theory for varieties in noncommutative polydomains. This includes various commutative cases which are closely connected to the theory of holomorphic functions in several complex variables and algebraic geometry. (Received September 04, 2013)