

1116-15-1729 **Leonard Stevenson*** (1s879@drexel.edu), 315 Madison Street, Sayre, PA 18840. *Higher Order Non-commutative Functions.*

Non-commutative functions are mappings on square matrices of all sizes which respect direct sums and similarities. Differentiating non-commutative functions iteratively, one arrives at functions of increasingly more matrix variables, whose values are multi-linear forms, which also respect direct sums and similarities, in a certain way. We call them nc functions of higher order. In my talk, I will discuss the Taylor-Taylor formula and other results for higher order non-commutative functions. (Received September 21, 2015)