

1135-VM-2754 **Joshua Brummer*** (brummerjd@ksu.edu) and **Virginia Naibo**. *Weighted fractional Leibniz-type rules for bilinear multiplier operators.*

In its simplest form, the product rule can be used to estimate a Lebesgue norm of the first derivative of the product of two functions in terms of Lebesgue norms of the functions themselves and their first derivatives. Motivated by problems in partial differential equations, this notion can be generalized in a number of directions. These include studying higher order derivatives and fractional derivatives, combining the functions using more general operators (instead of simple multiplication), or considering other function space norms. In this talk we will discuss some of those directions and present results on weighted fractional Leibniz-type rules for Coifman-Meyer and bi-parameter Coifman-Meyer multiplier operators. This is joint work with Virginia Naibo. (Received September 26, 2017)