1077-VJ-450 **George A Anastassiou** (ganastss@memphis.edu), University of Memphis, Memphis, TN 38152, and **Razvan A Mezei*** (rmezei@lander.edu), Deptartment of Mathematics and Computing, Lander University, 320 Stanley Avenue, Greenwood, SC 29649. *Quantitative Approximation by Fractional Smooth General Singular Operators.*

In this article we study the fractional smooth general singular integral operators on the real line, regarding their convergence to the unit operator with fractional rates in the uniform norm. The related established inequalities involve the higher order moduli of smoothness of the associated right and left Caputo fractional derivatives of the engaged function. Furthermore we produce a fractional Voronovskaya type result giving the fractional asymptotic expansion of the basic error of our approximation.

We finish with applications to fractional trigonometric singular integral operators. Our operators are not in general positive. (Received September 01, 2011)