1035-44-1183 **Byoung Soo Kim*** (mathkbs@snut.ac.kr), School of Liberal Arts, Seoul National University of Technology, Seoul, 139-743, South Korea. *Taylor's formula with remainder in Feynman's operational calculus.*

It is important in several areas of mathematics and its applications to be able to form functions of operators. In 1951 R. Feynman invented some rules, in his paper "An operator calculus having applications in quantum electrodynamics", for forming functions of noncommuting operators. The most extensively studied and applied approach to Feynman's operational (or functional) calculus is the noncommutative operational calculus created by V. Maslov in the early 1970's. Recently Jefferies and Johnson developed a mathematically rigorous approach to Feynman's operational calculi. We introduce and compare some basic properties of these two approaches. Also we discuss the Taylor's formula with remainder for functions of noncommuting operators. (Received September 19, 2007)