International J. of Math. Sci. & Engg. Appls. (IJMSEA)
Vol. 2 No. IV (2008), pp. 199 – 207

DIFFERENTIAL SUBORDINATION CONCERNING UNIFORMLY CONVEX AND UNIFORMLY CLOSE TO CONVEX FUNCTIONS

T. RAM REDDY, P. THIRUPTHI REDDY AND R. B. SHARMA

Abstract

Let $UCV_\alpha\ (h)$ denote the class of all functions $f \in A$ with $\frac{z(k_\alpha * f)'(z)}{(k_\alpha * f)(z)} \prec h(z)$ where $k_\alpha = \frac{z}{(1-z)^\alpha}$ (α is a real number) and $h(z)$ is a convex function with $h(0) = 1$ and Re $h(z) > 0$. Let $F(z) = \frac{c+1}{z^c}\int_0^z t^{c-1} f(t)dt$. It is proved that $F \in UCV_\alpha(h)$ whenever $f \in UCV_\alpha(h)$ and also that $UCV_{\alpha+1}(h) \subset UCV_\alpha\ (h)$ for $\alpha \geq 1$. Further more we proved that $UCC_{\alpha+1}(h) \subset U\,C\,C_\alpha(h)$ for $\alpha \geq 1$

Key Words : Uniformly Convex, Uniformly Starlike, Uniformly Close to Convex, Subordination and Convolution.

AMS Subject Classification : Primary 30C 45