ABSTRACT

The present Thesis entitled “Recent Interests in Complex Function Theory” comes as a continuation of the recent works in the complex function theory by eminent scholars like Al-Amiri, Al-Oboudi, Catas, Cho and Srivastava, Duren, Frasin, Goodman, Janowski, Maslina Darus and Rabha W. Ibrahim, Mostafa, Ruscheweyh, Salagean, Sakaguchi, Silverman and others. In the present work we introduce new subclasses of analytic functions by employing different techniques like convolution, subordination etc. We made an attempt to obtain new results which unify and generalize various results in the literature.

The classes discussed in the study are $T^\delta(b, \lambda, \alpha)$, $V^k(\lambda, \delta, \gamma, \mu)$, $VS_p(\lambda, m, \alpha)$, $VS_p(\lambda, m, \alpha, \beta)$, $K(A, B, s, t)$, $S^*(A, B, s, t)$, $K_\lambda(A, B, s, t)$, $S^*_\lambda(A, B, s, t)$, $S^{k,l}_\lambda(N; A, B)$, $C^{k,l}_\lambda(N; A, B)$, $TS_p(\alpha, \beta, \gamma)$ and $UCT(\alpha, \beta, \gamma)$. We deduce certain properties of these classes like sufficient conditions for functions to be in these classes, representation theorems, distortion theorems, coefficient estimates, argument properties, integral representation, estimation of radius of convexity and radius of starlikeness, subordination results and partial sums.