

Ruscheweyh-type starlike functions of complex order associated with q -difference operator**11.13** **Asena Çetinkaya***(Istanbul, Turkey)***Time:** Tuesday 23.07., 15:30 - 16:00, Room HS 4

Abstract: Quantum calculus or q -calculus dates back to Leonhard Euler (1707–1783) and Carl Gustav Jacobi (1804–1851). But q -calculus became popular only after its usefulness in quantum mechanics after 1905 paper by Albert Einstein. In 1909 and 1910 Jackson initiated in-depth study of q -calculus. He was the first to develop the q -integral and q -derivative in a systematic way. The great interest is due to its applications in various branches of mathematics and physics, as for example, in the areas of ordinary fractional calculus, orthogonal polynomials, basic hypergeometric functions, combinatorics.

In this paper, we investigate three new subclasses of Ruscheweyh-type starlike functions of complex order associated with q - difference operator. We investigate inclusion theorem, sufficient coefficient estimates, distortion bounds and radius of starlikeness of these subclasses. Further, we obtain partial sums of our classes.