Abstract

Improvised inequalities of Simpson's type are formulated on concavity and convexity for differentiable functions that are associated with the foremost Simpson's type inequalities for the mappings having $(\alpha, m) - convex$ derivatives are established. It comes up with better estimates than already demonstrated by certain researchers. New inequalities of Simpson's type and generalized Hermite-Hadamard inequalities for $s - (\alpha, m) - convex\ functions$ are also established. Some applications for special means of real numbers are also provided. Examples are also given to illustrate the results. Integral transforms of generalized form of Katugampola fractional integral operator are found. New fractional integral inequalities are established by using generalized form of Katugampola fractional integral operator and some useful results with important applications are presented.